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THE
ELEMENTS OF MEDICINE
OF

JOHN BROWN, M.D.

TRANSLATED FROM THE LATIN,

WITH COMMENTS AND ILLUSTRATIONS,

BY THE AUTHOR.

A NEW EDITION, REVISED AND CORRECTED.

WITH

A BIOGRAPHICAL PREFACE

BY THOMAS BEDDOES, M.D.

AND

A HEAD OF THE AUTHOR.

“ The coincidence of some parts of this work with correspondent deductions in the BRUNONIAN ELEMENTA MEDICINAE---a work (with some exceptions) of great genius---must be considered as a confirmation of the truth of the theory, as they were probably arrived at by different trains of reasoning.”

DR. DARWIN. ZOONOMIA. p. 75.

IN TWO VOLUMES.

VOLUME II.

LONDON:

PRINTED FOR J. JOHNSON, NO. 72, ST. PAUL'S
CHURCH-YARD.

MDCCXCV.

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THE
ELEMENTS
OF
MEDICINE.

PART II.

CHAP. IX.

Comparison of the different parts of the sthenic plan of cure with each other—Comparative efficacy of antisthenic remedies—Of bleeding—Of cold—Of vomiting, purging, and sweating—Spare diet—Rest—Conjunction of remedies—No remedies adapted to symptoms—Indirect debility to be obviated.

CCLXXXI. **I**N the sthenic diathesis, bleeding is the most powerful of all remedies; because it completely carries off a stimulus, so much more powerful than any other, as it is directly applied to a greater
VOL. II. B extent

extent of the system: consequently, as often as the diathesis is very high, bleeding should be freely used; but never risked during predisposition; and sparingly, or not at all ventured upon in diseases of a mild nature; in these other remedies should be preferred (*a*).

CCLXXXII. The next place to bleeding, when heat and other stimuli are guarded against, is claimed by cold. Heat is always hurtful, but still more after the application of cold; it is most hurtful, when it is combined with other excessively stimulant powers. Cold is always of service, in proportion to its degree; provided foreign stimuli, blended with it, and overcoming its debilitating effect, be cautiously shunned.

(*a*) See above, par. CCLXIX. With the exception of peripneumony, phrenitis, and violent and mismanaged cases of the small-pox and measles, and rheumatism; in the last in their mild state, as well as all the other sthenic cases, the lancet should never be unsheathed. That is to say, in seven cases out of ten even of the sthenic diseases, which are the only ones that either require or bear any degree of it, the practice must be laid aside, and never thought of in any asthenic affections whatever. Consequently, the cases, where it is in any degree allowable, are exceedingly few.

CCLXXXIII.

CCLXXXIII. The third place in rank belongs to vomiting, purging, and sweating. These evacuations have a powerful effect in removing sthenic diathesis, and therefore they, with great advantage, supersede the oftener imaginary than real necessity for profuse bleeding. They are frequently alone sufficient to restore the healthy state.

CCLXXXIV. When these remedies are employed, those articles of diet, the stimulant operation of which prevents the benefits to be received from them, should be sparingly used, in exact proportion to the degree of the diathesis. This precaution alone is adequate to the removal of predisposition, and often to that of diseases, especially those that depend upon a small diathesis.

CCLXXXV. With all these remedies we must conjoin rest, when the diseased state has taken place, and moderation in motion must be observed during the period of predisposition (b).

CCLXXXVI.

(b) So considerable a stimulus is exercise, that, in such a degree of sthenic diathesis, as that, which forms only predisposition to the diseases depending on it, exercise

CCLXXXVI. The practice of the common run of physicians is very bad, in trusting too much to any one of the remedies that have been mentioned, and overlooking all the rest, or enjoining them carelessly. We are not to depend upon bleeding alone, even in peripneumony itself; but employ all the rest either in concourse or succession.

CCLXXXVII. The disturbed functions, or those that are impaired (see above, par. CXLVII. CLI. CLXXII.), but not by a debilitating cause, admit of the general plan of cure, and no other.

CCLXXXVIII. The symptoms of debility, which arise in the progress of the disease from the violence of the sthenic diathesis, and threaten death from indirect debility, ought to be prevented by an early application of the remedies.

CCLXXXIX. The same early attention serves to prevent suppuration, effusion, and

may of itself be sufficient to effect the conversion of the predisposition into the actual diseased state. Often has the highest of these diseases, and even peripneumony itself, been brought on by violent exertion in exercise.

gangrene,

gangrene, which arise from ultimately excessive excitement, passing into indirect debility.

u. If sthenic diathesis should happen to be conjoined with a local disease, the former, to prevent it from aggravating the latter, should be removed by its own respective remedies.

C H A P. X.

Comparison of the different parts of the asthenic plan of cure with one another—Reproduction of a due quantity of blood—Management of stimuli—Heat—Diffusible stimuli—Diet—Opium—Wine—Spirits—Exercise—Management of the mind.

CCXC. IN asthenic diathesis, and the diseases depending upon it, to reproduce the proper quantity of blood is the most powerful remedy, when we, at last, have access to it, as it is the only means of restoring a stimulus of so much the more power and efficacy, as its direct application is made to so great an extent of the system (*a*). For which reason, as, in every degree of debility, the quantity of food (from which alone blood is made), that is taken and digested, is always in an inverse proportion to the degree of de-

(*a*) Compare this with par. CCLXXXI. above, and with all the paragraphs from CXXXI. to CXXXVI.

bility,

bility, or in a direct proportion to the degree of excitement, as much, in such a form, as can be taken and digested, should immediately, and without loss of time, be administered; on which account, if the debility be moderate, solid animal food, sparingly at a time, but often repeated, is proper and suitable. When the debility is greater, and solid animal food can neither be taken, nor, if taken, digested, flesh broth, as rich as possible, and as free from fatty matter, should be carefully administered. With a view to excite the stomach, and render it more fit for receiving and digesting this kind of food; the diffusible stimuli, such as different kinds of wine, and, more particularly still, opiates and other remedies of similar efficacy, ought to be constantly employed; sparingly at first, and afterwards more fully, if the debility be direct: after which, the use of the diffusible should be gradually laid aside, and, in the same gradual way, recourse be had to a larger and larger use of the more durable and natural stimuli. In case of indirect debility, we should also gradually descend from the highest to the lowest stimulus, as has

been mentioned formerly, and, in an inverse manner, go on from the smallest force of durable stimulus to the greatest. Lastly, in that moderate debility, which constitutes the predisposition to asthenic diseases, it must always be kept in mind, that abundance of blood is the greatest support of health(*b*), and that we are not to give way to a weakened appetite(*c*).

CCXCI. To the vital fluid, and these several means of increasing its quantity, the next remedy in the cure of asthenic diathesis is heat; as being the power by which animals and vegetables are brought forth into existence, are nourished, and acquire vigour, and afterwards, through the several stages of their decline, are upheld, till their excite-

(*b*) How widely different is this maxim from any that have hitherto ever been received in the profession of physic; in which flying to the use of the lancet, was the first thought that arose in the mind, with respect to the idea of cure of every disease; and bleeding and evacuations, through the course of each disease, the only remedies!

(*c*) This is equally the reverse of the general practice of inanition in almost every disease, without a single exception.

ment

ment is all extinguished (*d*). By heat, understand that point of external temperature, which intervenes as a mean betwixt cold, as it is called, and high heat, *ardor*; under which our sense of temperature is agreeable and pleasant; under which the body is neither indirectly weakened by that relaxation which produces sweat, nor directly by that torpor or benumbed state which cold begets; under which the functions of the whole body are excited, called forth, and, as it were, cherished in the sun beams; without which all other stimuli are of no effect (*e*).

CCXCII. Such a temperature as this is suited to every state of the body, but still more to different states of debility; because, in the latter case, as the excitement is deficient from other sources, there is so much

(*d*) Compare this with par. CXII. and CCLIV. and CCLX.

(*e*) It is plain, that though all the other powers should be in full action upon our bodies, and that with the effect of keeping up in them a due degree of excitement over all; yet plunging any person naked into a dense medium, suppose that of water, in a degree of cold at or under the freezing point, will most certainly, in an instant, put an end to life.

more

more occasion for this stimulus, which is much easier come at than many others, to supply the deficiency. Hence, both in other diseases of great and direct debility, and particularly in fevers, heat is found to be of the greatest service, and above all in such febrile complaints as cold has had any share in producing (*f*). In these diseases cold must be most carefully avoided, as it is always of a directly debilitating operation, and never of service but in sthenic diseases, and those that are in progress to indirect debility (*g*). We must be equally on our guard, in every degree of asthenic diathesis, against excessive heat, which is equally debilitating with cold, and equally productive of atony, laxity, and gangrene of the vessels, as well as stagnation

(*f*) See again par. CCLX.

(*g*) The operation of cold has been so widely mistaken by all physicians, that it comes to be of the greatest consequence to understand the several propositions stated in this work with regard to it. For that purpose consult par. XXXVII. and the note upon it marked θ . as well as par. CCLX. and all that has been said upon the subjects of either heat or cold in Chap. I. of the second Part, from CXII. to CXXIII. as also par. CXX.

and

and corruption of the fluids, in consequence of the inactive state of the vessels (*h*).

CCXCIII. As refilling the vessels is the best remedy, because its direct stimulus is applied over such an extent of the system; heat, which is immediately applied to the whole surface of the body, and directly affects the body to that extent, must be next in virtue to it.

CCXCIV. Since vomiting, purging (*i*), and sweating (*k*), are so powerful in debilitating, as to claim the third place of rank in the sthenic cure; they must, for that reason, by the same debilitating operation, be equally hurtful in asthenic diathesis, and the stimuli that stop their operation; and, consequently, both the other stimuli, and particularly the diffusible ones, equally serviceable.

CCXCV. In reviewing the list of stimuli, that answer this purpose, we must begin with the treatment of the slightest loss of fluids

(*h*) With this proposition compare par. CXV. CXVII. and CXVIII.

(*i*) See par. CCLXXXIII.

(*k*) See par. CCLV.

that occurs in this set of diseases, and proceed to the more violent affections.

In a slight looseness of belly, such as happens in predisposition to asthenic diseases, or in the slighter degrees of the latter; it will commonly be sufficient to abstain from vegetable food, and from weak, watery fluids, or such as are apt to ferment in the first passages, as the several liquors made from barley, called beers; to use animal food, as well seasoned and as rich as possible, and free from all fatty matter; to drink pure wine, or spirit, in different degrees of strength; and to take such exercise as is gentle in degree, and often repeated (1).

CCXCVI. When the belly is still looser, and moreover affected with gripes and pains, as in violent diarrhœa, and in dysentery, in which the loose stools are accompanied with vomiting; or when, without these troublesome symptoms affecting the belly, distressing vomiting is an urgent symptom; or,

(1) See and compare, for the more clear understanding of this paragraph, the CCLXVI. CCLXVIII. CCLXXIII.

when

when the vomiting is conjoined with a moisture upon the surface, or macerating sweat; or when sweat is the only urgent symptom, and as such wastes the strength, exhausts the body, and dissipates the fluids: in all these cases, we must have immediate recourse to the most diffusible stimuli, and check such an impoverishment of the system.

CCXCVII. In this case, the use of stimuli will be so much the more necessary, as other symptoms usually accompany these increased excretions. Their great efficacy, and stimulant power, are proved by their singular virtue in removing these and other symptoms in fevers and the other most violent asthenic diseases, nay, in the article of death itself, from ultimate debility.

CCXCVIII. Accordingly, in spasms and convulsions in the internal or external parts (*m*), in discharges of blood (*n*), in the raging delirium of fevers and other very violent diseases (*o*), in asthenic inflammation (*p*); when

(*m*) See par. CXCIV. and CXCVI.

(*n*) See par. CXXXIV. χ . ψ . and CCXXXII. and the subjoined notes.

(*o*) See par. CXCVIII. CC. CCI.

(*p*) See par. CCIV. to CCXII.

those

those stimuli, which have a more permanent influence, fail, the virtue of the diffusible stimulants, the principal of which is opium, is eminent.

CCXCIX. As, therefore, the energy of its stimulant virtue serves to check diarrhœa, and vomiting, or even sweating, when these symptoms are gentle, and depend upon a less violent cause; so that degree of its power, which is fitted to check these affections in the greatest height of their violence, and to re-establish the state of health, is by far the most considerable of all the powers, which are ever applied to the human body; as may be deduced from this, that when the action of all the other powers by which life is supported, is of no effect, it turns aside the instant stroke of death.

CCC. The weakest of the diffusible stimuli (*q*) are the white wines, except madeira, canary, good sherry; and the red wines, except port; and spirits procured by distillation, so diluted, as to equal the strength of the wines, or exceed it a little. Still

(*q*) See above par. CXXVI. *o. π. ε. ε.*

higher than these are spirits taken pure, and higher still, those that have undergone many rectifications. The strength is in proportion to the quantity of water expelled, and of alcohol retained.

CCCI. A higher place in the scale is claimed by musk, volatile alkali, camphor (though with the last our experiments are not yet so complete, as to ascertain its force exactly): next comes æther, and, last of all, opium. Unless, however, as they sometimes do, they have lost their effect by a continuance of application, and are, therefore, substituted in place of each other, for the sake of a renewal of the operation of each; and hence we take them all round, for the sake of repelling extreme debility. The preparations of opium, in every respect, are sufficient for most purposes of high stimulation.

CCCCII. Together with these remedies, regard must be had to the articles of diet. And, as in great debility, and the diseases depending upon it, of the only suitable matter, that is, meat, nothing solid can be taken; the matter to be used must be fluid, but strong. Along with the diffusible stimuli, jellies and
animal

animal soups should be given, sparingly at a time, but repeatedly, in proportion to the degree of debility. After that, when, chiefly by means of the diffusible stimuli, the strength is in part restored; at first solid meat should be likewise taken in sparing quantities, but often repeated; then more plentifully, and at longer intervals. In which progress the patient should gradually recede from the use of the diffusible stimuli.

CCCIH. When the diffusible stimuli are altogether laid aside, and the convalescent is given up to his usual diet, and his usual course of life, and to that management, which persons in health commonly observe, (only that more care is taken, than in perfect health, to avoid any thing that might prove hurtful); then it is, that every attempt of the physician should be directed to the consideration of the strength of his patient, as returning, but not yet quite established (*r*). In his movements he should first use gestation, and then gentle but frequent exercise, and the latter should always end in some,

(*r*) See above par. CV. and CIX.

but not an high, degree of fatigue. His sleep should neither be too long, nor too short, lest the former produce direct, the latter indirect debility(*s*): the most nourishing food should be taken, but not in too large a quantity, lest the excitability of the stomach be worn off, without the attainment of a due degree of vigour; but food should be frequently taken, in order to reduce the excitability gradually to its half wasted state(*t*), in which alone it is capable of giving due vigour; that degree of heat, which stimulates, should be employed(*u*), and both excess of heat, as well as cold, as they are equally debilitating, should be avoided; the patient should breathe pure air, and avoid impure; he should keep his mind in gentle action, observe moderation in his passions, and court agreeable objects of sense; he should have no companions around him, but agreeable ones, and be frequently at gay entertainments; he

(*s*) See par. CCXLII. and the following.

(*t*) See par. XXIV. XXV. XXVI.

(*u*) See par. CXII.

should travel through a pleasant country, and be moderate in the indulgence of love. Neither is the management of the senses, and the prevention of the return of contagious matter, to be neglected.

C H A P. XI.

How the remedies should be varied—Principle on which they should be combined—Bleeding debilitates the vessels chiefly—Purging, the bowels—Vomiting, the stomach—Cold, not alternating with heat, the skin—How all these powers are to be directed to the equable reduction of excitement—and the opposite powers to an equable increase of excitement, in asthenic diseases.

CCCIV. AS the noxious powers, that produce predisposition to diseases or diseases themselves, act some on one part, some on another, with somewhat more force than on any other equal part; and as this part is commonly that to which they are directly applied (a); so the powers, which are employed as remedies, in order that their general effect may reach the whole body with

(a) Par. XLIX.

the more certainty, should be, in the same manner, differently applied to different parts.

CCCV. The cure of any sthenic disease whatever, is improperly entrusted to bleeding alone, though that is one of the most powerful of the debilitating remedies. The reason is, that, though the excitability is sufficiently reduced by that remedy in the greater blood-vessels, perhaps too much, yet in the extremities of these, as well as in the rest of the body, it is not sufficiently reduced (*b*). Nor is the alternation of bleeding with purging a perfect mode of cure; because, though

(*b*) The action of every exciting power, whether salutary or hurtful, or curative, always extends over the whole body, the whole seat of excitability, but still with the inequality mentioned in the fourth chapter of part the first. This is the basis of the distinction with respect to the present subject: which is, that, as every power acts most effectually on the part where its action is immediately exerted, it is better to trust to a number, every one of which possesses that advantage, than rely on any one, however powerful otherwise; as by that means, whatever be the indication, whether it be to increase or diminish excitement, the effect will be more equally produced over all in consequence of there being a number of parts that have had a strong action exerted upon them.

the

the excessive excitement be sufficiently, and more than sufficiently, removed in the greater blood-vessels, and in the innumerable small arteries, whether exhalant or mucous, which discharge their fluid into the intestines; yet, neither on the perspiratory terminations of the arteries, nor on the rest of the body, is an equal debilitating energy exerted: the small vessels, for instance, which open into the stomach, are not sufficiently relieved of their distending load; and therefore stimulating load, the stimulus in any vessel being the quantity of its fluid. And although vomiting (*c*), which has been improperly neglected in the treatment of sthenic diseases, and still more improperly employed in every one of the asthenic, should be conjoined with the two remedies just mentioned, even this would not be enough to produce an equally diminished excitement; as there would still remain in the perspiratory vessels, the same state of excitement, as also in the rest of the body, that is not vascular. In

(*c*) See par. CCLXIX.

violent sthenic diseases, therefore, after diminishing the diathesis, and in the slightest from the beginning of the disease, the addition of the operation of sweating to the evacuations that have been spoken of, will produce a more equal diminution of excitement, and a more perfect solution of the disease. For by means of this evacuation, not only from the larger blood-vessels, in the interior parts of the body, but from an infinity of outlets both of the external, and internal surface of the body, an immense quantity of fluids, every where distending, and, thereby, producing a very great sum of excitement, is withdrawn. Nor is this all. For, since in slight sthenic affections, the patient can take much nourishing food, and in them all, too much; the consequence must be, that, however the quantity of blood and other fluids has been diminished, if food, which is the only power that can produce blood, continues to be taken, all the vessels, in proportion to the quantity that has been taken, will again go on to be filled, and to be fired with the fuel of excessive excitement. To prevent this inconvenience, and to diminish excitement,

excitement, with still greater equality over the system; abstinence, or a certain allowance of vegetable matter in a fluid form, and watery drink, will have a very great effect. Nor is this sufficient. For, if, after taking all the precautions and securities that have been recommended, the degree of heat, that proves hurtful from its stimulus, be allowed to approach the external surface of the body; it will produce another inequality of excitement, however much it may have been properly and equally diminished by the other means of cure. Wherefore, as the sthenic diathesis depends so much upon the stimulus of heat, directly affecting the skin (*d*), and is, on that account, prevalent in the skin in preference to other parts; to make sure of rendering the diminution of excitement as equal as possible, the debilitating effect of cold should be opposed to the high degree of excitement, which the heat has produced. When, at last, all the directions, which have been thus fully pointed out,

(*d*) See par. CXIII.

have been executed, still, to re-produce the equality of excitement, suited to good health; it remains, that we be on our guard against the stimuli that arise from the intellectual functions and passions. For, as they have great effect in producing sthenic diathesis (*e*), so the prevention of them, must be equally effectual in removing that diathesis, and in re-producing that equality of excitement, upon which health depends (*f*).

CCCVI. If the cure of sthenic diseases hitherto has consisted in bleeding, purging, and in the use of refrigeration in a few cases; and, if the other objects, which have now been so fully explained, have either been totally neglected, or mentioned in a slight way, by the by, and as if of no consequence, and, in the treatment prescribed in these cases, not reduced to any principle;

(*e*) See par. CXXXVIII. CXL.

(*f*) As the most healthy state of man is occasioned not by the operation of any one, or of a few exciting powers, but by the united operation of them all; so neither is its re-establishment to be effected, but by the same united operation of all the remedies, the last of which come to be the ordinary means of the support of the healthy state.

it

it will easily appear, from what has been said above and in other parts of this work, how much the knowledge of these diseases has been improved, both in the practical and reasoning part: and it will now, at last, be found a certain and established fact, that both the nature and true theory of sthenic diseases, as well as the method of treatment, considered either as an art and imitative, or as rational and scientific, has been discovered and demonstrated.

CCCVII. As the debilitating or anti-sthenic(*g*) remedies are the same with the asthenic noxious powers(*h*); so the sthenic remedies(*i*) are also the same as the sthenic noxious powers.

φ. And as the remedies of asthenic diathesis, to whatever part they are applied, also stimulate that part more than any other; some of them one, others another part, and increase the excitement;

CCCVIII. So, in asthenic diseases, if we want to rouse the excitement with more

(*g*) See par. XC.

(*h*) See par. CCCIV. to CCCVII. the present one.

(*i*) See par. XCI.

equality,

equality, and restore the lost strength, we must not depend upon the most diffusible stimuli alone (*k*). For, while they indeed increase excitement over the whole body, at the same time, they produce this effect in the stomach with greater force than any where else. Hence, even from the beginning of the cure, when hardly any food can be taken, and other durable and more natural stimuli (*l*) are most imperfectly applied; yet, together with the diffusible stimuli, soups (*m*) should be given, and as much haste as possible should be made to bring the patient to take solid meat, while care, at the same time, should be taken to apply a proper degree of heat. For, by this method, we most effectually secure both the internal and external surface. Nay, in the same way, we remove that inanition of the vessels which takes place in asthenic diseases in an exact proportion to their degree. For,

(*k*) See par. CCCI.

(*l*) As that of pure air, exercise, the stimulus of the motion of the blood and other fluids in their respective vessels.

(*m*) See par. CCCII.

though

though in case of that abundance of blood, which is the most powerful means of bringing on sthenic diseases, there is an opportunity of making a quick cure by the immediate taking away of blood; it is only by insensible, gradual, imperceptible, and unperceived successive steps, that we can obviate that penury of blood, which is the most noxious power in asthenic diseases, and replenish the vessels.

CCCIX. After this management of both surfaces of the body, and this partial filling of the vessels; still the excitement is not equally enough increased. To promote this effect, some very diffusible stimulus, suppose any preparation of opium, should at the same time be administered, and the little animal food, or meat, that there is any appetite for, and that can be digested, should be added. The method of giving food is evident from the late explanation about soups (see par. CCCVIII.). But, the use of the more durable, and less diffusible, stimulus depends on this, “that when the excitability is worn out by any one stimulus, any new stimulus finds

finds excitability, and draws it forth," and thereby produces a further variation of the effect.

CCCX. Hitherto, for want of the action of those muscles, which, from their situation on the surface of the body, propel the blood along the veins towards the heart, as well as from the inanition of the vessels, the excitement has remained too languid over that whole tract. Therefore, after the strength has been so far recruited, that rich food can be taken, the body may be moved, first by external means, and then by its own organs, of which the former is called gestation, the latter exercise, and also refreshed by air; when all this has been accomplished, the excitement will rise in several points, and become more equal upon the whole.

CCCXI. The last stimuli, which, along with those already mentioned, have a natural tendency to produce an equalization of excitement over the whole system, arise from the action of the mind, the energy of passion or emotion, and a still greater purity of air, than is attainable by persons shut up in
a room.

a room(*n*). To this state of convalescence, the same management, which was formerly directed during the decline of sthenic diseases, perfectly applies(*o*).

CCCXII. This stimulant plan of cure, in all its parts, is new, whether the reasoning part, or the merely practical, be regarded; and, whether the cause and the exciting noxious powers, or the indication of

(*n*) See and compare with these last mentioned stimuli the following paragraphs CCLXXV. CCLXXVIII. CCLXXIX. *π*.

(*o*) The convalescent state from either of the two general forms of diseases, or from local ones the effect of which had drawn the whole system into consent, is much the same; being a state of some remaining debility in all; in the sthenic from the excitement either going too low, by the remedies being pushed to some excess, or not equally diffused over all the parts in consequence of the natural supports only beginning to be brought fully into play; in the asthenic from the perfect point of health being not quite gained, either from the stimulant remedies not having been carried exactly up to 40, or from some of them having been carried further than the wasted excitability could receive them with invigorating effect, and thereby an inequality left upon the whole. The convalescence, from the general effects upon the constitution sometimes arising from local diseases, is to be explained upon the principles laid down, with respect to the two other cases of convalescence.

cure

cure and the remedies, be considered. May it not, therefore, be put as a question, whether the whole doctrine, which has here been delivered, has not, at last, brought forward clear proof, that the art of medicine, hitherto conjectural(*p*), inconsistent with itself, and

(*p*) Celsus says, *ars nostra conjecturalis est*. And every man of sense, whether of the profession, or out of it, has held the same sentiments of it. Nothing is more glaring than the contradictions in medical writings and reasoning of every kind, nothing ever could be more incoherent. If a piece of knowledge, that sets out with a fixed principle, which applies to all the parts of the detail, while they reflect on it, both illustration and confirmation, be entitled to be considered as a science, the reader is desired to consider, how far that criterion will apply to this doctrine. The pedantry of mathematicians has contributed as much to bring that science into disgrace, as any other circumstance, particularly in allowing no sort of probation, but that which is made out by lines and diagrams; while, except the elements of that science, every application of that department of knowledge has led to as many false conclusions as any other. If they will not allow the proof, that arises from our feelings, compared with those of all men, whose organs of sense are not deranged, what will they make of their own axioms? They must admit of other probation; while human reason holds its reign, truth and falsehood will be discriminated, without regard to such empty and useless prepossessions.

altogether

altogether incoherent, is now reduced to an exact science, proved not by mathematical principles, which is only one kind of evidence, but by physical ones, and established by the certain testimony of our senses, nay, and by the very axioms of the mathematical elements?

C H A P. XII.

As the action of all the other powers, that act upon living bodies, is the same, that of the remedies is also the same.

CCCXIII. IT is certain and indubitable that the existing powers have one common effect. They produce the phænomena peculiar to life—perception, motion, intellectual operation, and thinking. For what else, I ask, but to excite and sustain these common animal functions, is the effect of heat, of food, seasoned or unseasoned, of the blood, of the colourless fluids secreted from the blood, and of the air, among external bodies?—Among the functions themselves, have not muscular contraction, thought, the passions, and sensation, the same effect?—Now since it is an universal law of nature that the same cause produces the same effect, it is evident that the mode of operation of the several powers above enumerated must be
the

the same (*a*). Moreover, as their operation consists solely in stimulating (*b*), and as stimuli, therefore, produce all the phænomena of life—health, disease, and the intermediate degrees of predisposition (*c*); it must be admitted, that the operation of the remedies, both in sthenic and asthenic diseases, is the same. For, if there is no difference betwixt health and sthenic disease, except an excess of excitement in the latter, and none betwixt health and asthenic diseases, but deficient excitement in these last, what else can the operation of the remedies, in removing sthenic diseases, be, but to diminish, and of those that remove the asthenic, but to increase the excitement (*d*)?

CCCXIII. Whatever thing produces the same effect as another, or several other things, must be the same thing as each of them, each of them the same thing as it, and every individual of the whole set the same thing as every other individual.

(*a*) See par. XX. with the annexed note.

(*b*) See XIX. and XXII.

(*c*) See XXIII.

(*d*) See LXXXVIII.

ζ. In sthenic diseases, bleeding (*e*), vomiting, and purging (*f*), sweating, abstinence (*g*), rest of body and mind (*b*), tranquillity with respect to passion, all restore health by nothing else but a diminution of excitement.

CCCXIV. In asthenic diseases, the administration first of diffusible stimulants, for the purposes of gradually bringing back the appetite for the greatest remedy, food, as well as of keeping the food upon the stomach, and of assisting in the digestion of it (*i*), then the application of heat (*k*), then the use of the less diffusible and more durable stimulants, as animal food without and with seasoning, wine, gestation, gentle exercise (*l*), moderate sleep, pure air, exertion of mind, exertion in passion and emotion, an agreeable exercise of the senses, all these reproduce health, by no other operation, but that only of increasing excitement.

(*e*) See CCLXXXI.

(*f*) See CCLXXXIII.

(*g*) See CCLXXXIV.

(*b*) See CCLXXXV.

(*i*) See CCXCIV. to CCCII.

(*k*) See CCCII.

(*l*) See CCCII. to CCCIII.

C H A P. XIII.

That all the powers, which support any sort of life, are the same, or the fundamental principle of agriculture.

CCCXV. AGAIN, are not the powers, which produce perfect health, the same as those, which, by excess of operation, produce sthenic diseases; by deficiency of operation, asthenic; as well as the predispositions to both; are they not the same, I say, without any variation but of degree (*a*)?

CCCXVI. Further, as we learn from the whole doctrine delivered above, the noxious exciting powers, which produce sthenic diseases, are the remedies of asthenic; and those which produce asthenic, are the remedies of the sthenic (*b*).

CCCXVII. All the powers, therefore, that support any state of life, are the same in kind,

(*a*) See XXIII. LXXIII.

(*b*) See LXXXIX. XC. XCI. XCIII. XCIV.

only varying in degree; and the proposition is true, of every sort of life, to its full extent over the animal creation.

Such is the life of animals(*c*). Concerning which all that has been said, applies to the life of vegetables.

CCCXVIII. Accordingly, as animals, in every state of life, have their exciting powers(*d*); in predispositions and diseases their noxious exciting powers(*e*); in the cure of both their indications, and remedies adapted to each(*f*); all this, in every respect, is precisely the same in plants.

CCCXIX. The powers that support plants in every state of life, are heat, air, moisture, light, some motion, and their internal juices.

CCCXX. The actions of plants also are produced by stimulus(*g*); by means of which, the phenomena peculiar to this sort of life, perception, some motion, and ver-

(*c*) See from X. to XIII. inclusive.

(*d*) See LXII. LXVII. LXVIII. LXIX. LXXIII. CXII. to an CXLVII.

(*e*) See the same.

(*f*) See LXXXVIII. LXXXIX. XC. XCI.

(*g*) See XVII. XIX. and notes.

ture, are excited : and the cause of this state is excitement, an effect in common to all exciting powers (*b*).

CCCXXI. Nay, in this case too the exciting powers, when applied in due proportion, produce health ; but their too great or too sparing action occasions diseases, or predisposition to diseases ; of which one set depends on an excess, another upon a deficiency of stimulus. Accordingly, excess or scantiness of moisture, excessive heat or cold, equally lead to disease and death, indirectly or directly. And, as the rays of the sun or darkness, when their operation is either too great, or too long continued, prove debilitating, the former indirectly, the latter directly ; so the alternate succession of night to day, of darkness to night, seems to be the effect of an intention in nature, to prevent too great an effulgence of the light of day, or too long a continuance of it, from stimulating either in excess or in ultimate excess, and thereby inducing sthenic diseases,

(*b*) See Part I. Chap. II.

or those of indirect debility; and an excess, or long continuance of darkness from producing direct debility, and the diseases peculiar to it. We have no less proof, than that of the universal feeling of mankind, of the truth of what has been advanced, with respect to the stimulus of light and the debilitating effect of darkness.

CCCXXII. Nor are plants without their excitability, which, equally as in animals, “ is not different in different parts of its “ seat; nor is it made up of parts, but one “ uniform, undivided, property over the “ whole system (*i*).” Consequently, to whatever part of a plant any exciting power is applied, its operation, whether in excess, in due proportion, or in under-proportion, immediately affects the excitability over the whole.

CCCXXIII. This effect is also produced with the same inequality as in animals; being, for instance, greater in that part to which its exciting power is directly applied, than in any other equal part. And, as there are two reasons for this effect in animals, the

(*i*) See Part I. Chap. IV.

direct impression of the power upon the part more affected, and a greater energy of the excitability of the part to which it is so applied, than of that of any other equal part (*k*); the very same is the fact with respect to plants. Further, as the excitability bears a greater relation or affinity to the exciting powers, in the brain, the stomach, and intestines, than in most of the other parts; so the part in plants, that corresponds to these most excitable parts in animals, is the root, which is affected in the highest degree by the exciting powers. It is the root of plants, in preference to any other part, to which the conflux of moisture tends. The heat there is the most congenial, being neither excessive, and therefore liable to produce sthenic affection, or ultimately excessive, and therefore ready to induce indirect debility (both which disadvantages are prevented by a proper depth of soil); nor deficient, or what is called cold, which would bring on direct debility (*l*).

CCCXXIV.

(*k*) See XLIX. and addition L. LI.

(*l*) Hence it would appear, that it should be a general rule in ploughing and harrowing to adapt the depth, where the seed is to be laid, to the state of the surrounding

CCCXXIV. The only use of the soil, through the pores of which the powers that have been mentioned penetrate, is to furnish a proper strainer; so that the powers may not, from the pores being too patulous, go down in too great quantity, and produce first a sthenic, or too luxuriant a state of the plant, and then indirect debility; or, from the too great contractedness of the pores, be insufficiently admitted to the root, and occasion indirect debility, or the decaying state of a plant. But that soil is not otherwise necessary to the production of any degree of vegetable life, is proved by plants often living, to a certain degree, in pure water. That, however, it is useful as a filter, is proved by

rounding temperature. It would seem, when other circumstances are equal, that the seeds of plants may more safely lie superficially in warm than in cold countries. The same fact seems to be favoured by the difference of perfection that planted and natural woods attain in cold countries; the former, the seeds of which are lodged in a certain depth, turning to better account than the latter, which rise from seeds that have randomly been scattered upon the surface. Might not the hills in the west of Scotland, upon some such principle, be made useful oak forests?

the

the good effect of ploughing, of breaking the clods, of dividing the tough clay by lime and other absorbent earths, and by these means opening the soil: On the other hand, we have proof of this doctrine in the success of condensing the soil by making ground, naturally too friable, more tenacious with dung, and covering light ground with rags and stones, and thereby keeping in both heat and moisture.

CCCXXV. From this view of the facts, it is evident, why every sandy as well as clayey soil, when the former has not been made more tenacious, or the latter looser, must be barren and unfruitful. Hence very hot summers and countries are unfavourable to clayey grounds, by shutting up their pores; and serviceable to friable and lean grounds, by diminishing their porosity. Hence, dry seasons are suitable to low-lying rich grounds, to which, from all quarters, a quantity of moisture is brought, and applied around the roots of the plants; while rainy seasons are those that answer best in grounds lying high and having a thin soil. Declivities facing the north, which have commonly a thin and
poor

poor soil, are cherished and protected by hedges and clumps of trees, and by a great number of bare stones, covering the whole surface, which some persons, of more industry than sense, often remove with hurtful effect; for they are of service in preserving warmth and retaining moisture. But in those grounds, the declivity of which looks toward the south, there is not equal occasion for such protection from cold and dryness, as they, from their more happy situation, are cherished by the sun, defended from the cold winds, and exposed to those winds which blow from the southern points and are seldom too dry (*m*).

CCCXXVI. To return, from this digression on agriculture, to our proper subject; from what has been said upon the cultivation and nature of plants, we learn, that their life is similar to that of animals; that every

(*m*) While the northern winds, that is, the wind due north, and all the intermediate ones in every point of the compass from due east to due west, are cold and dry, and commonly of a tendency to bring snow; the southern, or the winds that blow from any point of the compass towards the south, from the same points of due east to due west, are as commonly warm and moist, and often productive of mild fertilizing rains.

thing

thing vital in nature is regulated by excitement, which the exciting powers alone produce; that there is in no living system, whether of the animal or vegetable kind, any inherent power necessary to the preservation of life; that the same powers which form life at first, and afterwards support it, have at last a tendency to produce its dissolution; that life, the prolongation of life, its decay, and death, are all states equally natural; that every living system lives in that which it procreates; that the generations of animals and vegetables are in this way renewed; that the system of nature remains, and maintains an eternal vigour; in one word, that all nature has been fabricated by one single organ (*n*).

There are many circumstances rendering it probable, that this globe has undergone great changes; that whatever is now sea, has been land; whatever is land at present, has

(*n*) No discovery, of any importance or extent over nature, has yet been made, that does not warrant, as far as the smallness of the number of such discoveries go, the truth of this assertion. See the Introduction to my Observations.

been

been sea; and that the fossil kingdom of nature has not been more retentive than the organic of the respective form of each of its individuals. But whether minerals, like animals and plants, have a sort of life, so as, after their manner, to be produced into living existence, to grow, equally with plants and animals, to pass a certain period without growth or diminution of bulk, to decay, to die, and, in death, lose their proper form; the long duration of their age, and the shortness of ours, deprive us of any possibility of learning.

CCCXXVII. All the motions of the planets, which were formed to remain and continue their courses for ever, depend upon this principle; to proceed straight onward, according to the manner in which all projectiles move, and then by the influence of gravity, which affects them all, to be drawn downwards, and, upon the whole, to perform circular motions. In the smaller living bodies, with which those greater bodies are peopled, that is, in animals and plants, of which the species remain, though the individuals of each species die; whatever is the
cause

cause of their functions, whatever gives commencement and perfection to these, the same weakens, and, at last, extinguishes them. It is not, therefore, true, that some powers are contrived by nature for the preservation of life and health, others to bring on diseases and death. The tendency of them all is indeed to support life, but in a forced way, and then to bring on death, but by a spontaneous operation.

PART THE THIRD.

OF GENERAL DISEASES.

THE FIRST FORM, OR STHENIC DISEASES.

CHAP. I.

*Circumstance common to all sthenic diseases—
Peculiarities—Phlegmasiæ and exanthemata
—Circumstances they have in common—
Their peculiarities—Rationale of the pulse
—Shivering—Lassitude—Dry skin—Ex-
cretions—Heat—Thirst—Nature of the in-
flammation in phlegmasiæ—General affection
precedes that of a part, and regulates the
latter—Opposite general affections arise from
the same local accident, as a wound, when
the diatheses, previous to the accident, are
of an opposite kind—Enumeration of the
sthenic phlegmasiæ.*

CCCXXVIII. **T**O every sthenia, to all
sthenic diseases, to the
whole first form of diseases (a), increased

(a) See above par. LXIX. LXXXVIII. CXLVIII.
CLI. CCLI. Chap. IX.

excitement over the whole system is a common circumstance: it appears, during the predisposition, in an encrease of the functions of body and mind (*b*); and, after the arrival of disease, in an increase of some of the functions, a disturbance of others, and a diminution of others; in such sort, that the two latter phænomena are easily perceived to arise from the noxious powers that produce the former, and to depend upon their cause. As by this common bond of union the diseases of this form are connected together; so

CCCXXIX. There are certain circumstances, by which they are distinguished by a difference of their degree: for, there are some sthenic diseases accompanied with pyrexia (*c*); some with inflammation of an external part; there are others without the latter of these, and others without both.

CCCXXX. The general sthenic diseases with pyrexia and inflammation, are some of them called phlegmasiæ, others exanthemata.

(*b*) See par. CLI. throughout.

(*c*) See par. LXVIII. and the subjoined note, for the meaning of pyrexia, which will be just now repeated.

But they will all, without any other distinction, be treated here according to their rank in excitement, from the highest to the lowest degree.

CCCXXXI. The phlegmasiæ and exanthematic diseases have the following symptoms in common. That degree of sthenic diathesis, that distinguishes predisposition (*d*). This diathesis upon the formation of the disease, is succeeded by shivering, a sense of cold, languor, and a certain feeling like that which we have in fatigue from labour, called by physicians, lassitude. The pulse at first, in every case, and in mild ones through their whole course, is moderately frequent, and, at the same time, strong and hard: The skin is dry, and there is a retention of the other excretions, as well as of perspiration (*e*): The urine is red; there is great heat, and often thirst.

(*d*) From the first deviation from perfect health to the commencement of actual sthenic disease, the sthenic diathesis takes place in an increasing scale from 40° to 55°.

(*e*) Such as that by the belly, and that which pours out the saliva and mucus, and forms the matter of expectoration.

CCCXXXII.

CCCXXXII. The symptoms peculiar to the phlegmasiæ (*f*), are an inflammation of an external part, or an affection nearly allied to it; while the general affection, for the most part, precedes this local one, but never succeeds to it (*g*). This general affection, for

(*f*) The phlegmasiæ are sthenic diseases, accompanied with inflammation in an external part, as has been said somewhere before, according to the definition of nosologists. But, as there is no difference betwixt them and synocha or the catarrh, which latter are unaccompanied with inflammation, we therefore pay no regard to the distinction; and shall regard nothing either in these or any other diseases, but what is constituted by a real difference of excitement. It is the excitement by which we are to be guided through our whole distribution of diseases.

(*g*) Long before any part of this doctrine was discovered, when I was in search of certain facts respecting peripneumony and pleuritis, I discovered one which I was not looking for, of more importance than all the rest put together. It had been asserted, by most systematics and all the nosologists, that the primary symptom in the phlegmasiæ was the inflammation of a part, I saw that was not true with respect to rheumatism, in which the general affection or pyrexia often rages one, two, or three days before the sign of inflammation, pain, is perceived in any of the joints. I could also discern, that from the moment the pain and inflammation appeared

for the greater convenience of distinguishing it from fevers, is to be denominated pyrexia (*b*). In the exanthematic sthenic diseases, an eruption of spots or pustules, more or less crowded, according to the degree of the diathesis, covers

in erysipelas, or the rose, there was also the general affection equally conspicuous. In short, in no one of that set of diseases, did the fact appear, that the inflammation was primary, and the pyrexia, or affection of the whole system dependent upon it. But as peripneumony was said in Edinburgh to be an exception, the detection I made equally disproved that. In all the works of Morgagni, where peripneumony and erysipelas are treated; and in all those of Trillerus, a professed writer on that subject, and in a thesis in Sandiforth's Thesaurus, taken from no less than 400 cases of that disease (for they are now by others, as well as me, considered as one), I found that in somewhat more than one-half of the given number, which was very respectable, the general affection appeared from one to three days before the pain came on, and in all the rest of the cases that, though for any thing these authors said to the contrary, they might sometimes have come on together, yet there was not one, in which it could be fairly alleged, that the pain was the first and primary appearance. Hence I found, that all the theories raised upon that hypothesis of course fell to the ground. Indeed the fact is quite consistent with every one here.

(*b*) Of this designation warning has been given more than once. See note at CCCXXIX.

and

and diversifies the skin. The eruption appears in consequence of a foreign, contagious, matter having been taken into the body, and detained below the cuticle.

CCCXXXIII. The explanation of all these symptoms easily flows from the doctrine delivered above. The sthenic diathesis, in the manner that has been so fully explained (*i*), precedes. The characteristics of the pulse are never to be referred to the affection of a part, having been demonstrated to arise from the diathesis (*k*).

CCCXXXIV. The frequency of the pulse in sthenic diseases is moderate, because, while the stimulus in the system cannot fail to produce some additional frequency, the quantity of blood, to be thrown into quick motion, sets bounds to it and prevents its rising to quickness (*l*). But, at the same time, it is evident,

(*i*) See above all the paragraphs, where the operation of the powers producing sthenic diathesis are accounted for.

(*k*) See also par. CLV. and CLVI. and particularly CLXXIV.

(*l*) If this cause ever operates, it is probably not the principal cause. As both the systole and diastole of the

evident, that a quantity so great cannot be transmitted with the same celerity, as an under proportion (*m*). The strength of the pulse is occasioned by the degree of excitement in the moving fibres of the vessels, which is commonly called their tone, and by that of their density considered as simple solids (LIX. LX. and LXI.). The hardness of the sthenic pulse is nothing else, than

vessels are more considerable in sthenic diathesis than in health, we cannot expect them to be performed with such celerity as in some asthenic diseases, though the fibres may contract with more velocity than even in health. EDITOR.

(*m*) In fevers and other asthenic diseases of great debility, from the weakness of the stomach and other digestive organs, and the small quantity of nutrient matter taken in, the quantity of blood which is diminished in every one of these diseases, cannot be more than one-third less than that which overfills the vessels in sthenic diseases. Consequently, by a given power, it may be propelled in the same proportion, that is, one-third faster than in the sthenic diseases, which also appears in fact; for while 100 beats in a minute is a frequent pulse in sthenic diseases, till their approach or actual conversion to indirect debility, the common frequency in fevers and the other high asthenic diseases, is 150 beats in the same time.

the

the continuance for some time of each strong contraction, closely embracing a great column of blood, and, thereby, as it were, resembling a stretched rope (*n*).

CCCXXXV. That this is the exact state

(*n*) See par. CLV. If it should be alleged, that, though in fevers and the other cases mentioned just now in the note (*m*), the deficient quantity of blood to be put in motion will account for the greater celerity of motion, than in the diseases which make the present subject; still the great weakness of the heart, for want of the stimulus of a due quantity of blood, as well as of many others, should overbalance the effect arising from the small quantity to be moved. But the answer to that objection is easy. It arises from the explanation of the strength and hardness of the pulse just now mentioned in the text. The febrile pulse is indeed one-third quicker than the sthenic pyrexial, but it is weak, and small, and soft, while the other is strong, and full, and hard. An equal force then of the heart to that in the sthenic case is not required to account for the difference of the effect. A third less of blood, with an equal force behind, will be driven not only one-third faster, but with strength and hardness. The want of these two last then is to be set to the account of the heart's greater weakness. Though the blood then be driven one-third quicker, yet the impulse communicated upon the whole is one-third less, as the characteristics of both kinds of pulse readily explain to us.

of the arteries is proved by the great quantity of food taken with a good appetite, before the arrival of the disease, during the period of predisposition; it is proved by this plentiful diet and other powers giving an unusually great excitement over the whole system (*o*), and, therefore, among their other effects, increasing the digestive energy; and by evacuant with other debilitating remedies, both preventing and removing the diseases. To confound, therefore, this state with one diametrically opposite (*p*), which has hitherto been an universal practice, was a very capital blunder, and could not fail to produce the worst consequences, by equally perverting the theories and actual practice of medicine.

CCCXXXVI. The shivering and sense of cold depend upon the dryness of the skin.

(*o*) See the whole of the first chapter of part II. upon the powers producing sthenic diathesis.

(*p*) Which authors and too many practitioners have universally done, in jumbling proper fevers with the present diseases, under the vague and false denomination of febrile or feverish diseases. In nosology the synochus is conjoined with typhus, the gangrenous sore-throat, which is a typhus fever, with the common sthenic inflammatory pyrexia.

The

The languor and feeling of lassitude point out a higher degree of excitement in the brain and fibres of the muscles, than can be conveniently borne by the excitability, which is confined within certain boundaries (*q*). They are therefore functions impaired from a stimulant, not from a debilitating cause (*r*).

CCCXXXVII. The dryness of the skin is occasioned by the great excitement and density of the fibres, that encircle the extreme vessels, diminishing their diameters to such a degree, that the imperceptible vapour of perspiration cannot be taken into them, or, if taken in, cannot be discharged (*s*). This state is not spasm, or constriction from cold, but a sthenic diathesis, somewhat greater on the surface, than in any other part. The stimulant energy of heat, especially after the application of cold, which is always a powerful exciting cause of sthenic diseases, is applied to this part with more force than to any of the interior parts, and increases the sum total of stimulant operation (*t*).

(*q*) See above CLIV.

(*r*) See above par. CLXVI.

(*s*) See LXIX. and CXIII.

(*t*) See XXXVII. 0. and CXIII. just now quoted.

CCCXXXVIII. The same, in general, is the cause of the temporary retention of the other excretions (*u*) ; only that the operation of heat, just mentioned (*x*), is foreign to the present explanation ; and on that account, the diathesis, that affects the interior vessels, is more gentle. These vessels, both for that reason and because they are naturally of a larger diameter, are sooner relaxed in sthenic diseases, than the pores upon the skin (*y*).

CCCXXXIX. The redness of the urine is owing to the general diathesis affecting the vessels that secrete it, and proving an obstacle to the secretion (*z*). Hence arises an effort in the fluid to be secreted to distend the small vessels (*a*), and a counter effort of the mov-

(*u*) See CCCXXXI. and note (*d*) ; and also the par. CLIX. CLX. CLXIII.

(*x*) In the CCCXXXVII. and the reason is, that heat being stationary in the interior parts, has not that force which it has upon the external surface. See above par. CXIII.

(*y*) It is reasonable to think, that vessels, which pour out a watery fluid, have a larger diameter than those, which, like the perspiratory, even in their healthy state, only transmit an imperceptible vapour.

(*z*) See par. CLXIII.

(*a*) Or tubuli uriniferi.

ing fibres, by their contraction to diminish the cavities which the distention increases; and, in so far as they perform the function of simple fibres, to resist the distention. But, as, in this forcible action of the vessels, the cohesive force of all the simple solids yields somewhat, the effect comes to be the transmission of some particles of blood. This transmission happens not at first, because the distention does not suddenly, but after some time, overpower the cohesion of the simple solids.

CCCXL. The cause of the great heat is the interruption of the perspiration, preventing the heat generated in the inner parts of the system from passing off by the skin.

CCCXLI. The thirst is occasioned by the sthenic diathesis, closing up the excretory vessels of the throat, and there opposing the excretion of the peculiar fluid (*b*). And the heat, by dissipating what fluid is excreted, contributes to the effect.

CCCXLII. The inflammation and analogous affection (*c*), whether of a catarrhal or

(*b*) See par. CLIX.

(*c*) Mentioned above in par. CCCXXXII.

of any other nature, are parts of the sthenic diathesis, greater in the affected, than any other equal, part of the system (*d*): Which is manifested by the exciting powers, also in this case acting upon the whole system; by the symptoms of the diseases showing an affection common to the whole; and by the remedies driving that affection, not from the inflamed part only, but from the whole system (*e*).

CCCXLIII. The general affection, for the most part, precedes that confined to one part, or is synchronous with it, but never comes after it, because the excessive excitement (*f*) that produces the diathesis, exists before the disease itself (*g*); and, though it forms the rudiments of the local affection during the predisposition (*h*), yet it does not, so early, form that affection itself, and not always even during the disease, but only in cases where we observe a certain high degree both

(*d*) CLXVIII. CLXIX. CLXX. CLXXI.

(*e*) LXXXIX. See also part first, chap. IV.

(*f*) See LXII. LXIX.

(*g*) See CLXXIV.

(*h*) See above CLXIX.

of the disease and of the affection itself (*i*). Hence, when the diathesis is great, the affection of the part is in proportion, as in peripneumony and rheumatism, inflammatory sore throat, and mild erysipelatous sore throat; and slight under a less degree of the diathesis, as in the sthenic; while in a moderate and gentle diathesis it does not happen at all, as in synocha, or the common inflammatory fever and catarrh; because a high degree of diathesis is necessary to the formation of it. Thus in peripneumony, where the diathesis is the greatest, and in rheumatism, where it is next in greatness, the inflammation is found proportionably great (*k*). And even in the measles, where the danger turns

(*i*) See above CLXVIII. *n*.

(*k*) This proposition does not go so far as to assert, that there may not be a sthenic disease, without any actual inflammation, but with an affection of a part nearly allied to it, which depends upon an equally high diathesis as either peripneumony or rheumatism, and even higher than the latter. Such we find, as I have formerly said (CLVII. and CLVIII.) in phrenitis. But the meaning is, that the inflammation, when it does happen, is always in proportion to the degree of diathesis.

entirely

entirely upon the degree of sthenic diathesis, the danger of inflammation is equal; and here the lungs themselves are often highly inflamed. Synocha is never phrenitic, but when a great diathesis occurs, threatening the brain with inflammation. Nor is there any danger to be apprehended in erysipelas, even when its inflammation affects the face, but when the pyrexia is violent. The mildness of the diathesis ensures a favourable termination. Simple synocha is nothing else than a phlegmasia, consisting of a pyrexia and diathesis, inadequate, upon account of their small degree, to the production of inflammation. Yet, as all the noxious powers producing synocha, and all its remedies are precisely the same, with those of any phlegmasia; to separate it from them, and to unite it with fevers, which are diseases of extreme debility, was an unpardonable blunder(*1*); especially as inflammation, which
was

(1) This has been more than once hinted at, and once a little above. The nosologists have excluded synocha from their order of phlegmasiæ, because forsooth, though it was in every other respect the same, it wanted the inflammation

was falsely supposed essential to the nature of the phlegmasiæ, actually takes place in synocha, as often as the diathesis, necessary to produce it, is present (*m*). Yet this error, upon account of another, neither of a slighter nature, nor of less hurtful consequence, that of supposing inflammation to be the cause of the phlegmasiæ, necessarily escaped observation. In fine, to remove all doubt of inflammation being compatible with the nature of catarrh, though upon account of the moderate general diathesis, upon which catarrh usually depends, inflammation does not usually take place in it; even in it, as often as the diathesis rises high, which sometimes happens, when the proper plan of cure has been neglected, and the effect of the exciting noxious powers has been carried to ex-

flammation of a part, and they united it with proper fevers, though in the powers producing it, in its proper cause, and in the remedies that remove it, it was in every respect diametrically opposite to those diseases. But their rule of judging was different from ours.

(*m*) What is a peripneumony, a rheumatism, or any phlegmasia, but a synocha, with a diathesis sufficient to produce inflammation?

cess,

cess, an inflammation, and a formidable one indeed, arises, often affecting the throat (*n*), and sometimes the lungs, and producing there an affection rising to all the rage of a peripneumony.

CCCXLIV. It is in vain to object that a thorn thrust under the nail, and wounding it, will superinduce inflammation upon the wound, and spread a similar affection along the arm to the shoulder, and a pyrexia over the whole body; and to adduce this as an illustration and proof of the manner, in which the phlegmasiæ arise from inflammation. For nothing like a phlegmasia follows this or any similar affection of a part, unless the sthenic diathesis previously happens to have taken place, and is upon the eve of spontaneously breaking out into some one or other of its respective diseases. Without that diathesis, no general affection takes place, and if an opposite diathesis be present when such an accident happens, an opposite general affection will be the consequence, to wit,

(*n*) When that happens it is still commonly a mild disease, as will be shown by and by.

a typhus,

a typhus, arising as a symptom of gangrene (*o*), and dangerous to life.

CCCXLV. That the affection of the part depends upon the general affection is proved by the frequent occurrence of inflammation, without being followed by any phlegmasia. This occurs, as in the case just mentioned, as often as the general diathesis is absent, or the inflamed part is not an internal one and of high sensibility (*p*). Accordingly, all the examples of phlegmone, and of erythema or erysipelas, without general diathesis (*q*), are quite

(*o*) It is with much regret, that I should have had occasion to observe the bad, and too often fatal, consequence of treating such local affections, without discrimination of the habit with which they may coincide. The disease is treated by evacuation and starving, even in habits the most weakened, and strong drink is withheld from persons even the most accustomed to it. The disease increases, and, as if that were for want of more such treatment, the same treatment is persevered in till death closes the scene.

(*p*) See above CLXXI.

(*q*) See also par. LXXXI. The nosologists, under their genus of phlegmone, which in one of them is divided into two species, proper phlegmone, and erythema, have raked together a number of local, and most
of

quite different in their nature from the phlegmasiæ, though they have been absurdly classed with them, and more absurdly still considered as their prototypes; since they are in fact all only local affections, or symptoms of other diseases. This opinion is not weakened by a certain resemblance of dis-

of them insignificant affections, which they have considered as laying the foundation of their phlegmasiæ, or general sthenic diseases with an inflammation in a part. But will any man in his senses see any connexion betwixt chill-blanes, which is one of them, or anthrax, which is a local symptom of the plague, or the slight inflammation upon the eye, called a stie, or the inflammation in the groins of children from their being scalded by their urine, or the bites of insects, the effects of which are confined to the bitten part; will he see any connexion betwixt these and a peripneumony; which arises from hurtful powers affecting the whole system, and no part in particular; and is cured by remedies that affect the whole system, and the inflamed part not more, or even so much as many others? All these, however, have been made the prototypes of inflammation, by which they meant their phlegmasiæ; as if there were nothing to be regarded in them but the inflammation, which, in fact, is their most insignificant part, bearing no higher proportion to the sum of morbid state over the system than that of 6 to 3000, or even less. See above Part I. chap. IV. and particularly par. L.

eases

eases with inflammation in an internal part to the phlegmasiæ; for these diseases are neither preceded by the usual noxious powers, that produce either the phlegmasiæ, or any general disease whatever, nor cured by the usual remedies of the latter. It was, therefore, a mistake of most pernicious consequence to the practice, to enumerate among the phlegmasiæ those diseases, that arise from stimulants, acrids, and compression, and which are only curable by removing their local cause, which is seldom effected by art(*r*).

CCCXLVI.

(*r*) See above par. LXXXI. Take for an example gastritis, which the nosologists have made one of their phlegmasiæ, and put upon the same footing with peripneumony and the other diseases that may be admitted as phlegmasiæ. That affection is an inflammation in a portion of the stomach, in consequence of a solution of continuity from the previous swallowing of ground glass, small fish bones, a quantity of Cayenne pepper; or symptomatic of a scirrhus obstruction and tumour. These, not the ordinary hurtful ones that operate upon the whole system, as in the true phlegmasiæ, are the powers that induce that affection. It has no connection with the excitement, the affection of which is only an effect of the locally stimulating power, and of the sensibility of the stomach; its true cause being the solution of con-

CCCXLVI. It is not without good reason, that the appellation of pyrexia has been given to the general affection, which appears in the phlegmasiæ and exanthemata; for thus they are most advantageously distinguished on the one hand from fevers, which are diseases of debility in extreme, and on the other from a similar, but altogether different, affection, which is a symptom of local diseases(*s*), and may be called a symptomatic pyrexia.

tinuity or obstruction, keeping up the inflammation; and its remedies such, as are adapted to the removal of that local state. It may happen to a sound habit, where there is no diathesis in any degree; in which case it is purely local; or it may accidentally coincide with either diathesis; in which case it is a combination. When the combination is with sthenic diathesis, debilitating evacuant remedies can only palliate; but they bring life into danger when the asthenic diathesis is present, which is 17 times out of 20 for the other.

(*s*) The general affection arising in the system from the effect of a thorn pushed under the nail (see par. CCCXLIV. and note), and that occurring in the gastritis, mentioned in the last paragraph of the text (see the note on that paragraph) are good examples of cases, to which the term symptomatic pyrexia should be applied.

CCCXLVII.

CCCXLVII. The true sthenic diseases (*t*), which, except one, are all accompanied with pyrexia (*u*) and external inflammation (*x*), are peripneumony, phrenitis, the small pox, the measles, as often as these two last are violent, the severe erysipelas, rheumatism, the mild erysipelas, and the cynanche tonsillaris. Those free from inflammation are catarrh, simple synocha, the scarlet fever, the small pox, the measles; when, in the two latter instances, the eruption consists only in a few pustules.

The Description of Peripneumony.

CCCXLVIII. The symptoms peculiar to peripneumony (*y*) (under which term pleu-

(*t*) See above CCCXXIX.

(*u*) See par. CCCXXXII.

(*x*) See CLXVIII.

(*y*) The symptoms in common to it and the other diseases of the same form, enumerated in the last paragraph, have been described in par. CCCXXXI. These peculiarly distinguishing the phlegmasiæ and exanthemata, that is the diseases either accompanied with inflammation, or an approach to it, are described in par. CCCXXXII.

rify, and carditis, as far as it is a general disease, are comprehended), are pain somewhere in the region of the chest, often changing its seat; difficult breathing; cough, for the most part attended with expectoration, and sometimes with a mixture of blood in the matter expectorated.

CCCXLIX. The seat of the disease is the whole body, the whole nervous system (*z*); as appears from the disease being produced by an increase of the diathesis, which took place in the predisposition, and by no new circumstance (*a*); from the inflammation within the chest, for the most part following the pyrexia at a considerable interval of time, and never preceding it (*b*); and from bleeding and other remedies of similar operation, which do not affect the inflamed part, more than any other equally distant from the centre of activity, removing the disease. The proper seat of the inflamma-

(*z*) See par. XLVII. XLVIII. XLIX. LIV. LV. and not the inflamed portion in the lungs, according to the common opinion.

(*a*) See above LXXV. LXXVI.

(*b*) See above CCCXXXII. and the note (*g*).

tion,

tion, which is only a part of the general diathesis, is either the substance of the lungs and the production of the pleura, that covers their surface; or some part of that membrane, whether the part lining the ribs, or that containing, within the external surface of it, the thoracic viscera; it is different in different cases, and in the same case at different times.

CCCL. The pain in the chest depends upon an inflammation of the corresponding internal parts just mentioned (*c*), as is proved by dissection; though indeed it is still oftener occasioned by an adhesion of the lungs to the pleura costalis, seldom to an inflammation of that membrane, as we learn from the same evidence.

CCCLI. When the inflammation takes place on the surface of the lungs, it is impossible it can be confined either to the substance of the lungs, or the membrane covering their surface. For how can any person suppose, that the points of the same vessels, whether distributed upon the membrane, or

(*c*) See above par. CLXXIV.

plunging into the substance of the lungs, or emerging from it, can be inflamed without a communication of the affection to the contiguous points (*d*). The distinction, there-

(*d*) Yet one nosologist, upon that very supposition, makes two orders of phlegmasiæ, one seated on the membrane, the other in the interior surface of each viscus. Into this error, he had been led, by observing, that, after death, the interior substance of the liver exhibited signs of previous inflammation. And, as other dissections showed the membrane upon other occasions to have been in a state of inflammation, he thence drew his rash conclusion. But it is to be observed, that the first mentioned state of the liver was not a phlegmasia at all, as it had not during life exhibited any of the symptoms of that disease, or even given any sign of the presence of inflammation. It is a case, then, we have nothing to do with upon this subject, even so far as it applies to the liver. But the extending the application to all the viscera, which he was pleased to make the seats of some phlegmasiæ or other, was looseness of reasoning, and carelessness of matter of fact, in the extreme. A gentleman, whose works have lately been buried, without any struggle or signs of life, but that of a feeble unintelligible sound from within the tomb, which no living reason could make any sense of in their life time, took it into his head to maintain (for the sake of seeming to differ with men of name and reputation, his highest ambition), that the inflammation in the phlegmasiæ was always seated in the membrane: The answer to which is given in the text.

fore,

fore, of the inflammation accompanying the phlegmasiæ into parenchymatose, or that affecting the substance of the viscus, and into membranous, and the notion which makes the latter case universal, are equally remote from the truth. The reason why neither the membrane contiguous to the lungs, nor the substance of the latter, is always inflamed, and why the inflammation is sometimes communicated to some part of the neighbouring membrane, appears from the vicinity of the part inflamed in the last case to that which receives the air, and, therefore, varies in its temperature (*e*).

CCCLII. The pain often shifts its seat (*f*) in the course of the disease, because its im-

(*e*) So far is it from being true, that this sort of inflammation can be confined to a few points of the affected vessels (see the preceding note), that in fact we find it, though not so often as has been supposed, sometimes in the mediastinum, sometimes in the external membrane of the pericardium, sometimes in the superiour membrane of the diaphragm. Boerhaave's notion of the translation of inflammation from one viscus to another, was an error in the opposite extreme.

(*f*) See above CCCXLVIII.

mediate cause, the inflammation, is equally liable to change, being disposed to leave its first seat, or in some measure to remain in it, while it becomes more considerable in another. This appears from the comparison of the known change of the pain with the traces of inflammation in the corresponding parts, discovered after death (*g*).

CCCLIII. This fact, added to those already produced, constitutes another solid argument (*b*) in refutation of the opinion of those who believe the disease to be produced or kept up by inflammation, or in some shape to depend upon it; it confirms the doctrine here advanced, and proves that the inflammation is regulated by a strong general diathesis, and directed by it sometimes to one part, sometimes to another; and that, as depending on this cause, it increases, and is in a manner multiplied. And the same conclusion is confirmed by the inflammation abating, becoming more simple, and at last re-

(*g*) Many such are to be found in Morgagni, Bonnetus, and Lieutaud.

(*b*) See all that has been said.

ceding from every part it had occupied, in proportion to the progress of the treatment in relieving or removing the diathesis. The same idea is confirmed by the nature of rheumatism, in which the pains are severer and more numerous, in proportion as the diathesis runs higher; and milder and fewer in proportion to its gentleness. These pains, which have their dependence upon the general diathesis and are a part of the general disease, ought to be distinguished from local ones, which often occur, and may accidentally precede this disease. Stitches, as they are called, frequently happen from slight accidents, and may appear before the arrival of rheumatism, but they should be distinguished from the pains that arise from the diathesis, constituting that disease; a distinction, that has seldom been attended to, for want of a right principle to lead to such attention.

CCCLIV. The difficult breathing is not owing to any organic defect in the lungs, or to defect of excitement in them, but to the air alone, which in inspiration fills and distends its own, and compresses the inflamed vessels.

CCCLV.

CCCLV. The cause of the cough is a large secretion and excretion of the exhalable fluid and mucus, irritating the air vessels and increasing their excitement, as well as that of all the powers that enlarge the cavity of the thorax; then suddenly suspending it, and thus occasioning a full inspiration and a full expiration, partly in conjunction with the operation of the will (*i*).

CCCLVI. The cough is little or none at first; because, on account of a strong diathesis occupying the extremities of the vessels, the same fluids issue in the form of an insensible vapour, are less irritating in that form, and dismissed with less effort.

CCCLVII. Again, the cough is afterwards followed by expectoration; because the accumulated fluids are carried forward in the rapid action of the air, which, at the time of the cough, rushes out, as it were, in a torrent (*k*). The mixture of blood points out the effort of secretion formerly explained.

CCCLVIII. The softness of the pulse, commonly taken into the definition of this

(*i*) See above CLX. and CLXI.

(*k*) See above par. CCXXXIX.

disease, at least when they called it peripneumony, has been here rejected, because the characteristics of the pulse do not follow the inflammation, but the general diathesis (*l*). With respect to the diathesis, the proper expression is, that the pulse, instead of soft, is less hard; and when the effect, that the treatment has produced upon the pulse, is considered, it may then be said to be soft (*m*).

CCCLIX. Nor is the varying feeling of pain, which is described as sometimes acute, and pungent, sometimes obtuse, gravitative, and rather to be considered as uneasiness than pain, though immediately dependent upon the inflammation, to be regarded as of any consequence in pointing out the state or seat of the inflammation: because, however great the inflammation is, wherever it is seated, whatever danger it announces, the only

(*l*) See above CLV. CLXXIV.

(*m*) It is an universal effect of sthenic diathesis to render the pulse hard in one degree or another. And peripneumony is not an exception from that fact. But the distinction arose from the mistake of inflammation being the whole, instead of an unimportant part of, the disease.

means

means of removing it, and of averting the danger, is to remove the general diathesis. The notion, therefore, of the membrane being inflamed, when the pain is acute, and the interior substance, when the pain is obtuse, must be regarded as groundless, or rather must be guarded against as pernicious (*n*).—When the disease has arrived at an advanced stage, the sudden abatement of the pain, without a proportional relief of the breathing, to an unskilful person often gives an appearance of real return of health. But the cause, which has nothing to do with the seat or sort of inflammation, is that degree of excitement, which shows, that the excitability is exhausted, the excitement come to an end, and that its vigour, before excessive, is now converted into direct or indirect debility (*o*). Hence in the vessels, especially the inflamed vessels, in place of

(*n*) See par. CCCLI. and the note under it at (*d*).

(*o*) The direct debility may be owing to the proper cure, which is directly debilitating, having been carried too far, or to the indirect debility arising in the course of the disease, seldom now to alexipharmic treatment. See above par. XLVII. and the subjoined notes.

the excessive excitement, with which they were before affected, we have no excitement at all; and extreme laxity takes the place of their former density. Hence, instead of an excretion increased by violence, an immense discharge takes place without force and without effort, merely from the watery part of the fluids, on account of the inert state of the vessels, parting from the more consistent; and a sudden suffocation, in consequence of an effusion of fluids from all quarters into the air vessels, terminates the scene.

CCCLX. The carditis, or inflammation of the heart, is a disease of rare occurrence, is ill understood, and for the most part a local affection. When the latter is the case, there is no occasion for the interference of a physician. And, if ever it be a general disease, it admits of no other definition or cure but those of peripneumony. From peripneumony then, as it arises from the same antecedent noxious powers, and is removed by the same remedies, it is not to be separated.

The

The Description of Phrenitis.

CCCLXI. Phrenitis is one of the phlegmasiæ(*p*), with a slight inflammatory or catarrhal affection of some one, or more joints, or of the fauces, with head-ach, redness of the face and eyes, impatience of light and sound, watchfulness, and delirium.

CCCLXII. Inflammation, in its proper form, never appears in this disease. And yet there is an approach to inflammatory state in the joints, in the muscles, and especially over the spine, or about the chest, or low down the throat; or else there is a catarrhal state, which is, however, an affection depending upon the same cause, as inflammation, and only differing from it in being less violent.

CCCLXIII. The head-ach, and redness of the face and eyes, arise from an excessive quantity of blood in the vessels of the brain and its membranes, distending, stimulating

(*p*) See above par. CCCXLVII.

in excess, and producing contraction of the vessels to a degree that gives pain(*q*). To the production of pain, inflammation is not necessary: for, independently of this inflammation, action is painful, because it exceeds that mediocrity at which agreeable sensation takes place(*r*). The redness both points out and explains the overproportion of blood. And that the overproportion gives pain by its distending operation, is shown by the relief that bleeding and every thing that diminishes the quantity, and moderates the impetus of the blood, administers.

CCCLXIV. It is the overabundance of blood also that produces the impatience of light and sound. For, as a certain impulse of the blood is necessary to the exercise of every sense, in order to whet the organ of sensation(*s*); so, when this rises to excess,

(*q*) See above CLVII. and CLVIII.

(*r*) See par. CLXXXII. CLXXXIII.

(*s*) There is commonly in the organ where any nicety of sense is to be exercised an extraordinary apparatus of blood vessels. Blood flowing into these, increases, by its heat and the stimulus of its motion, the sense, to which the organ is subservient.

an equal increase of sensation must be the consequence. But these very symptoms, along with pain, arise in an opposite state of excitement, to wit, the asthenic.

CCCLXV. The vigilance and delirium are occasioned by excess of excitement, which is produced by the excessive stimulus of the abundance of blood and of the other powers. Other noxious powers, contributing to the effect, are intense thinking, and a high commotion of the passions. Excited by these, no body, when even in health, sleeps; and, therefore, the wonder is the less, that a high degree of them, under the influence of a violent disease, should repel sleep. Both increased watching and delirium are symptoms of disturbance.

An Explanation of the Sthenic Exanthemata.

CCCLXVI. The sthenic exanthemata, after the application of a contagious matter, and of the usual noxious powers which produce sthenic diathesis, appear first in the form of sthenic pyrexia, or synocha, and then,
after

after a space of time, not precisely fixed, are followed with smaller or larger spots.

CCCLXVII. That the exanthematic sthenic diseases differ not from other sthenic diseases, in any circumstance of consequence, is proved by this strong argument; that, except the eruption and the phenomena peculiar to it, there is nothing in the symptoms, and, except the contagion, there is nothing in the noxious exciting powers, but what happens in any sthenic disease; and the preventatives, as well as the remedies, are the same in all. Such being the fact, it was the height of absurdity, merely for the sake of the eruption and its peculiar phenomena, to separate the exanthematic from their kindred diseases, and to class them with diseases the most opposite both to them and to one another (*t*). For how, when the usual
plan

(*t*) The nosologists have separated the exanthematic diseases, real or imaginary, into a class or order by themselves, which they have filled up with diseases, of which there is not two, but the small-pox and measles, that have any other connection, than their mere eruptive appearance, while they are separated from others, with which, in every respect, they have the most essential

plan of cure removes the effect of the eruption, whatever that be, and thereby shows
it

connection. Thus the small-pox and measles are taken from the natural place to which they are here restored. And it is unaccountable, that we should have it to say, that even erysipelas, which has surely no right even to the slim distinction of eruptive, has also been placed among them. Again, the plague, which is to all intents and purposes a typhus fever, its eruptive part not always disjoining it from that, is separated from it, though it is so nearly the same, scarcely excepting degree, and conjoined with sthenic diseases of a diametrically opposite nature. And the gangrenous fore-throat, which is also a typhus, has neither been placed among fevers, in its proper place, nor among the exanthemata; to which the efflorescence, that it produces on the external surface, according to their own rules of arrangement, seemed better to entitle it than some others, especially the erysipelas. And it again (for there is no end of the confusion of this pretended order of some physicians), is conjoined not only as a genus with sthenic diseases, but even as a species of one of those genera. The truth is, that systematics, who were otherwise no nosologists, have made too much work about eruptive and contagious diseases, and have never dived into the interior nature either of them or almost of any other. They have all followed each other from their first leader, and never once deigned to turn a glance of their eye upon the phenomena of nature as these arose before them. Hip-
pocrates

it to be the same, can any one imagine, that the cause should be different, and not precisely the same? unless we must again have to do with those, who maintain, that the same effect may flow from different causes. Truly, the operation of contagion, in so far as it gives rise to general disease, is not of an opposite nature to the general sthenic operation, but precisely the same.

CCCLXVIII. Contagion is a certain matter, imperceptible, of an unknown nature, and like most of the phænomena of nature, only in any measure open to inquiry in its evident effects. Taken from the body of one affected with it, or from any gross matter (such as clothes or furniture, where it happens to have been lurking), and received into an healthy body, it ferments without any change of the solids or fluids, fills all

pocrates misled his followers, they misled theirs from age to age, and they all misled the poor nosologists: who have laid on the cop-stone of the absurdity of the art, and, having finished the fabric of folly, left mankind, if they are not pleased with it, to look out at their leisure for a better and more solid.

the vessels, and then is gradually ejected by the pores (*u*).

CCCLXIX. And, as no effect, except sthenic diathesis, follows it, and as the noxious powers, that otherwise usually produce that diathesis, always precede it, and an asthenic or debilitating plan of cure always and alone succeeds in removing it, and consequently its effect no way differs from the diseases before mentioned; it is, therefore, with justice, that the diseases arising from it, are conjoined with these others, as belonging to the same form.

CCCLXX. There is only this difference betwixt them, that in the exanthematic cases of sthenic disease, the matter requires some time to pass out of the body, but the period is different in different cases; and it passes out more or less freely, the more free or impeded the perspiration is (*x*). But it is impeded by no spasm, by no constriction

(*u*) There is no reason whatever to suppose contagious matters to ferment in the body. It is only necessary that they produce a certain action of certain parts, of the superficial vessels, for instance. EDITOR.

(*x*) See above par. XXI. and LXXVI.

from

from cold, and only by the prevalence of sthenic diathesis upon the surface of the body; as is evident from this, that cold, by its debilitating operation, procuring a free issue for the matter, clearly promotes the perspiration (*y*). That it produces this effect, by diminishing the diathesis, not by removing spasm, has been formerly demonstrated. As the issue of the matter is in this way promoted by inducing a free perspiration; so

CCCLXXI. Whatever part of it is detained below the cuticle, acquires a certain acrimony during its continuance there, produces little inflammations, and conducts them, when produced, to suppuration. These, by irritating the affected part, create a symptomatic pyrexia and symptomatic sthenic diathesis, which should be distinguished from the general pyrexia and general sthenic diathesis (*z*).

CCCLXXII. The period of eruption is more or less determinate, because the opera-

(*y*) See par. CXVII. CXVIII. CXX. CXXI.

(*z*) See above par. CLXXV. and CCCXVI.

tion of fermentation, being in some measure certain and uniform, requires a certain uniform space of time for being finished, diffused over the system, and reaching the surface, as is attested by the effect. Again, it is not exactly determined, because the perspiration, from the varying state of vigour, must, at different times, and under different circumstances, be more vigorous or more languid.

CCCLXXIII. The pyrexia, symptomatic of the eruption, sometimes assumes the form of an actual fever: The reason of which is, that the high degree of stimulus, which the eruption gives to the whole surface, produces ultimately excessive excitement, and afterwards puts an end to it in the establishment of indirect debility (*a*).

The Description of the violent Small-Pox.

CCCLXXIV. The violent small-pox is a sthenic exanthema, in which, on the third

(*a*) See par. CCXV. CCXVI.

or fourth day, sometimes later, break out small spots or points, inflamed, and which by and by change into regular pustules; containing a liquor, which, generally on the eighth day after the eruption, often later, is converted into pus, and dwindles away in the form of crusts. The eruption, of which the degree is always in proportion to that of the sthenic diathesis, in this case is the greatest that ever occurs.

CCCLXXV. All these phænomena are governed by the laws of fermentation (*b*). The number of pustules, being proportioned to the degree of diathesis, shows, that, without thenoxious powers, which of themselves, without any co-operation of contagious matter, produce the diathesis, the contagion has not much effect in producing the real morbid state, and that it chiefly regulates the exterior form of the disease; which, without diathesis, is of no consequence, and does not amount to general morbid state.

CCCLXXVI. But the violent small-pox is distinguished by the following symptoms:

(*b*) See above par. CCCLXVIII.

Before the eruption there is a very severe pyrexia; this is succeeded by an universal crust of pustules over the whole body. The noxious powers antecedent to this are very violent sthenic ones, particularly heat; the remedies that remove it are very asthenic, and in preference to any of them cold.

The Description of the violent Measles.

CCCLXXVII. The violent measles is a sthenic exanthematic disease (*c*), beginning with sneezing, watery eyes, dry cough, and hoarseness; on the fourth day, or later, there appears an eruption of small numerous papulæ or little points; these on the third day, or later, terminate in an appearance of branny scales. This disease, when preceded with a high degree of sthenic diathesis, is proportionally violent.

CCCLXXVIII. The sneezing, watery eyes, dry cough, and hoarseness, are catarrhal symptoms, and, therefore, depend upon sthenic

(*c*) See above par. CCCLXVI.

diathesis.

diathesis(*d*). And, since they appear, four days or more before the eruption, that is, before the matter might seem to have reached the affected parts, and are constant and universal; here we are to suppose, that the sthenic diathesis is the effect of the noxious powers, that usually produce it, and not entirely of the peculiar contagious matter, and that this diathesis is indispensably necessary to the measles. But though this supposition should be rejected, and it should be contended, that these symptoms arise from the contagious matter; it still must be granted, that this disease differs in nothing from other sthenic diseases, but equally depends upon sthenic diathesis, and yields to antisthenic or debilitating remedies. And it must be allowed, that, since the contagious matter produces the same effect as the usual noxious powers, its operation must be absolutely the same, and so the cause of the disease the same. Consequently, we find nothing in the indication of cure, but what is common to this disease with other sthenic

(*d*) See above par. CLXXV.

exanthemata ; viz. that time must be given to the matter to pass out of the body, and the perspiration be conducted in the same manner, as when we have any other form of sthenic diathesis to treat (*e*).

CCCLXXIX. The eruption admits of the same reasoning that has been employed above (*f*). The circumstance of its being a violent disease when preceded by a violent sthenic diathesis, and mild in a mild degree of that diathesis, is a further instance of the little difference that there is betwixt the operation of contagion, and that of the ordinary powers producing sthenic diathesis.

CCCLXXX. When the diathesis runs so high as to suppress the perspiration, the eruption often disappears for a time, as if it receded into the interior parts of the body. This dangerous appearance occurs chiefly towards the end of the disease. The fact is, that this matter, in the same manner as the variolous, kindles a symptomatic inflammation over the surface of the body, and then,

(*e*) See above par. XCVI.

(*f*) See above par. CCCLXXV.

by a further increase of the diathesis, suppresses the perspiration. Hence the lungs (g) and other viscera are often inflamed.

CCCLXXXI.

(g) That the lungs should be inflamed in a violent state of the diathesis in the measles is not to be wondered at; as the common catarrh, when its diathesis runs high, is liable to produce the same effect. (See par. CCCXLIII. towards the end.) But, considering how many facts in medical writings I have found false, the effect of that on my mind, is to render the weight of testimony in favour of the various internal viscera being so liable to be inflamed, from this supposed striking in of the measly eruption, very light, and to dispose me to doubt of the fact altogether: Which I am the more inclined to do, from the analogy of a broad fact in direct contradiction to it: Which is, that the inflammation, depending upon the general diathesis in febrile diseases, never, as I have yet found, affects an interior part. (See par. CXIII. CLXVIII.) Neither is inflammation, from any other source, near so frequent in internal parts as vulgar opinion has taught us. Dissection has shown inflammation in the intestinal canal in dysentery, or what is called in English the bloody flux. But that only happened under the evacuant, debilitating, vegetable, plan of cure; and, even in that case, seems to have been an ultimate, not an early, effect, much less a cause. And it has been shown, that what has been considered as a burning inflammation in the first passages, is not an inflammation at all. (See above par. CXCVIII.) Nay,
even

CCCLXXXI. The violent state of the small-pox, from the great stimulus of the eruption, often converts both the sthenic diathesis and eruption into asthenic, and thereby produces the confluent small-pox, of which we are afterwards to treat. Whether any thing like this occurs in measles, is not yet ascertained: But, as every excess of excite-

even when inflammation does happen internally, it is never of the sthenic, but always of the general, or local, asthenic kind, and, when quickly cured, cannot be inflammation. If there be any truth in the frequency of inflammation towards the end of the measles, it must be of the asthenic kind: Which is the more likely from its late appearance, and from a circumstance that, though no where taken notice of, has great weight with me; which is, that, as the distinct small-pox passes into the confluent, peripneumony into dropsy of the chest, and any sthenic disease with its diathesis, into any asthenic disease, and the diathesis on which it depends; there is nothing in the nature of the animal œconomy and of the powers acting on it, to prevent the same conversion of sthenic into asthenic state in the measles. And if, which is most probable from the alexipharmic practice, that was then used in this disease, indirect debility can induce such a change, no disease has a fuller chance for it than the measles. But I am sure, were the debilitating plan used from the beginning, no such consequence would happen.

ment,

ment, as in the conversion of peripneumony into a dropsy of the chest, is liable to induce indirect debility, it is, therefore, scarce to be doubted, but that the same thing happens in this disease, which is inferiour to none in violence.

The Description of the violent Erysipelas.

CCCLXXXII. The violent erysipelas is a phlegmasia, always beginning with pyrexia, and followed by inflammation. The inflammation is seated in some external part of the body, ofteneft in the face, sometimes in the throat; it is of a red colour, has an unequal edge, is somewhat raised, creeps from one place to another, and is attended with a sense of burning.

CCCLXXXIII. It is peculiar to this inflammation to invade the corpus mucosum, which the other general inflammations never do. To assign a reason for this peculiarity is of no consequence; since this inflammation does not differ from the others either in the operation of the exciting powers producing

ducing it, or in that of the remedies which remove it.

CCCLXXXIV. The cause of the redness of the inflammation, in this as well as in every case, is an excessive quantity of blood in the inflamed vessels; for the question about the degree of redness is of no importance. There is less swelling in the inflamed part than in other sthenic inflammations, because there is here a free space betwixt the scarf skin and true skin, allowing the effused humour room to spread and diffuse itself. This is also the cause of the slow creeping motion of the inflammation, and of the inequality of its edges. The sense of burning is owing to an acrimony of the contained fluid, acquired by stagnation(*b*).

CCCLXXXV. The attack of the inflammation upon the face is not more dangerous than upon any other place, except when the diathesis, upon which it depends, is great,

(*b*) This may safely be questioned, since, if the vessels are excessively full of blood and excessively excited, there is no occasion to suppose any other cause of the heat: and this latter hypothesis is much more agreeable to analogy. EDITOR.

and

and renders the inflammation proportionally great (*i*). In which case, whatever part is inflamed, the disease must be held for a severe one; but still severer, if the inflammation seizes the face; for then the disease is always accompanied by great commotion in the system.

CCCLXXXVI. When such a sthenic diathesis and affection of the head depending on it, occur, no disease is more dangerous, none more rapid in its race to death; while in a mild diathesis no disease is milder.

A Description of Rheumatism.

CCCLXXXVII. Rheumatism is a phlegmasia, most frequent in that temperament, which inclines to the sanguine. It is a consequence of heat succeeding to cold, or so alternating with it as to prove on this account the more stimulant: It is accompanied with pain nigh, or between, the joints, chiefly the large joints, and proportioned to

(*i*) See par. LXXXV. CCCXLIII.

the degree of the diathesis (*k*): And the inflammation always succeeds the pyrexia.

CCCLXXXVIII. External temperature is hurtful in this disease in the same way, as has been often explained (*l*).

CCCLXXXIX. The rage of pain is in the parts that have been mentioned (*m*), because it is these parts that the inflammation, or more increased part of the general diathesis (*n*), chiefly affects. The reason of this is, that nearly the most powerful of the exciting noxious causes, the temperature that has been mentioned (*o*), only affects them. There can be no translation of the inflammation to the internal parts, since these parts, which preserve nearly an equal temperature amidst every change of it externally, are not affected by the same hurtful power which annoys the external parts.

CCCXC. Cold is not, according to the common opinion, hurtful in this disease by

(*k*) CCCXLIII.

(*l*) CXIII. et passim.

(*m*) CLXVIII.

(*n*) Ibid.

(*o*) CXIII.

producing

producing constriction ; because the violence of the disease is greatest under the operation of heat, which has an effect quite opposite to that of constriction(*p*). This fact is confirmed by stimulant diet, in all its articles, proving always hurtful, and by abstinence being always serviceable, and often alone effecting the cure. This affords a sufficient refutation of the mistaken notion, according to which, temperature is alleged to be more hurtful, and sweating more serviceable, than is consistent with the truth ; as if there were no other noxious powers but the former, no other remedies but the latter. In this, as well as in all other general sthenic diseases, it is the general sthenic diathesis alone that produces, and the solution of it alone that removes, the disease. The fact is not only well ascertained, but countenanced by the analogy of every part of this doctrine that has yet been delivered. Such pains of parts, as sometimes precede this disease, oftener happen without being followed by it : whether followed by rheumatism or not, they

(*p*) Ibid.

have nothing to do with sthenic diathesis, upon which this disease entirely hinges; they proceed from a local affection, or belong to a very different general disease, rheumatism, of which more hereafter.

CCCXCI. The reason why the larger joints are affected in this disease, and the smaller in the gout, is the following: In rheumatism, because the other circumstances of the disease, as well as the pains, depend upon a violent sthenic diathesis; the greater joints, which, for the reasons assigned, are more subject to the diathesis, have also a greater share of the disease. But, as the gout consists in debility, its violence will be greatest, where there is naturally the greatest debility, and therefore in the extreme parts, and those most remote from the centre of activity (*q*).

A De-

(*q*) To make this subject simple to any apprehension. A person has been exposed to intense cold a whole day. He comes home at night, is set by a warm fire, receives hot meat and warm cordial drink. He is next covered up in his bed with an addition of clothes, receives more warm strong drink. He falls asleep, and next morning feels a pain in some part or other of his upper extremities,

A Description of the mild Erysipelas.

CCCXCII. Both the definition and explanation of the violent erysipelas (*r*), delivered before, are applicable to the mild; the latter, however, both in the antecedent noxious powers, in the symptoms, and in the whole nature of its cause, must be understood to be much milder than the former, and not only so, but a remarkably mild disease.

CCCXCIII. It is often not so much a sequel of the sthenic cynanche, which is commonly called tonsillar or the common inflammatory fore-throat, as a supervention upon it before it has finished its course. It often

ties, nigh, or between, the great joints; and, previous to that, a high state of heat and bouncing pulse, with a certain feeling of uneasiness in different parts of his trunk. The pains increase in the bed next night in proportion to the increase of the general affection; and cold, evacuation, and abstinence from food, from alternation of temperature, cure him.

(*r*) From CCCLXXXII. to CCCLXXXVII.

appears alone and unaccompanied with the cynanche, arising from a similar lenity of the noxious powers, and manifesting a similar mildness of symptoms through its whole course.

CCCXCIV. Nay, in the same persons, in the same state of the noxious powers, sometimes this erysipelas, sometimes cynanche, sometimes catarrh, arise promiscuously, and are all removed by the same mild method of cure (s).

A Description of the Cynanche Sthenica.

CCCXCV. The sthenic cynanche is a phlegmasia, with an inflammation of the

(s) I have often experienced them all, sometimes singly, sometimes all three, in the course of the same disease, oftener a combination of inflammatory fore-throat, and the mild erysipelas, and, as far as I could observe, could discern, that the degrees of phlogistic state that produced them, and of remedies that removed them, were both gentle, the former as stimulants, and the latter as debilitating powers; and both so nearly of the same degree, that, in arranging them, I was at a loss which to place over the other in the scale.

throat,

throat, and especially of the tonsils, but never preceding the pyrexia: It is accompanied with swelling and redness, and an aggravation of pain in swallowing, especially any thing fluid.

CCCXCVI. The reason for the inflammation occupying the place mentioned here, has been given before (*t*). And, when it has once taken place, it is afterwards liable to frequent recurrence, because its seat is exposed to the operation of the most noxious power, heat and alternation of temperature (see XXXVI. with addition), and is less covered than other parts (*u*): And the vessels first distended by the inflammation, and then afterwards relaxed, take in an overproportion of blood upon every increase of its impetus (*x*).

(*t*) See CXIII. CCCXLII.

(*u*) See par. CLXVIII. If one is walking in the evening, when a sudden fog comes on, with cold and chilliness, he may cover his throat externally, but it is impossible to defend it internally.

(*x*) This is so liable to happen, when any person has once experienced this disease, that the increased motion of the blood in walking in a warm day, and then sitting down in a cool place, has sometimes produced ophthalmia, sometimes this fore-throat.

CCCXCVII. The inflammation here, as in the other phlegmasiæ (*y*), never precedes the pyrexia, for the reason assigned (*z*); but if an unskilful person should think it does, the reason he will have been misled is, the gradual degeneracy of the general sthenic inflammation into a local disease, from its frequent recurrence, and from its leaving behind, after each attack, a taint in the affected part. This latter inflammation may happen, without a general sthenic diathesis, and, therefore, without being followed by a sthenic cynanche; and it may accidentally coincide with the former, or sthenic diathesis, and, therefore, precede the latter, or sthenic cynanche: But, in both cases, it ought to be distinguished from the pure general case, for the sake of guarding against the commission of a hurtful mistake in the treatment (*a*). In an asthenic habit, whether succeeding to the former or not, there is again

(*y*) See the definitions of them all, &c.

(*z*) See par. CLXVIII. CCCXLIII.

(*a*) This might happen to a person under an asthenic diathesis, which would be increased by the debilitating plan of cure, and would be useless in the absence of diathesis.

another

another general inflammation, to be referred to asthenic diseases,

CCCXCVIII. If any person can explain why the pain is aggravated in swallowing liquids, he may communicate his knowledge; if he cannot, it is no matter.

CCCXCIX. The cynanche œsophagæa has been here omitted, because it is a rare affection, and admits of the same reasoning and cure as the tonsillar, from which it differs only in the inflammation being lower down, and a little redness only coming within view. But, as there is always a suspicion that it may be local, from erosion or a burn of the œsophagus, from the application of an hard, corrosive or hot substance; the above distinctions should be attended to, and made use of for the sake of practice. See above LXXXI. LXXXIII. CLXX.

CCCC. There is likewise a rare disease, sometimes occurring in certain countries, never in others, called the croup (*b*). In this disease the respiration is laborious, the inspi-

(*b*) By nosologists cynanche stridula.

ration sonorous, with hoarseness, a ringing cough, and a swelling scarce to be discerned (*c*). It is a disease that infects very young children almost only. And in all other particulars it is of a doubtful nature (*d*).

CCCCI. In forming your judgment concerning this disease, when it happens to occur in practice, attend to the following circumstances. As the sthenic diathesis, in the degree requisite to the formation of actual disease, which depends upon a high degree of diathesis, occurs less frequently, either in the beginning, or towards the end of life; because the high degree of excitability in the former, and its low degree in the latter, admit a smaller degree of the effect of the exciting power, that is, a smaller force of

(*c*) It is perceived upon dissection of the dead subject.

(*d*) I never saw this disease, but when I was so young a student, that any observations I could make, can be of no use to me now. There have been many battles of words about it, whether it be inflammatory or spasmodic, without any adequate meaning of the differences betwixt these two words, at least so far as to influence the practice; which remained much the same betwixt the parties, and probably the right one was missed by both.

excite-

excitement (*e*), than the long period of human life betwixt these two extremes ; yet it is not altogether foreign from either (*f*). In childhood, the high degree of excitability compensates for the slightness of the stimulus ; while, in old age, the high degree and force of the latter may compensate for the deficiency of the former, and suffice to induce some sthenic diathesis, even to that degree which constitutes disease. Thus infants undergo wonderful vicissitudes of excitement, and within the shortest spaces of time. To-day they will show every sign of extreme debility, tomorrow every one of restored vigour ; because in them the operation of any stimulus soon rises to its highest pitch, upon account of their high excitability, and sinks as soon to its lowest, upon account of its own small degree (*g*). Hence every sthenic

(*e*) See par. XXV. and XXVI.

(*f*) Though it is seldom that either a child, or very old man, will be so sthenic as to need bleeding and much evacuation, yet they will sometimes.

(*g*) A child of mine was given over for death by his nurse : His mother gave him some of the diffusible stimulus. He slept two hours, and when he waked made signs, for he could not yet speak, to have a little pie, most of which he ate.

diathesis,

diathesis, that happens to them, is short, acute, and soon removed (*b*); nor is their asthenic state of long continuance, or difficult to be removed; provided there is no local affection, which very seldom, indeed, happens; and a proper method of cure is employed; which, till of late, has been very rare: the antiphlogistic cure having made away with three-fourths of mankind, before they arrived at the seventh year of their age.

CCCCII. The marks of sthenic diathesis at this age are, great frequency of pulse, when compared with that of adults, more frequent than their own in health, distinctly meeting the finger upon feeling it; a state of bowels rather costive at first, which goes off in the progress of the disease; dryness of the skin; burning heat, thirst, watching, strong crying.

CCCCIII. The signs of the asthenic diathesis at the same age are, a pulse not to be numbered from its frequency, small, falling softly like snow upon the finger, so that you are uncertain if you touch it at all; a very loose scouring belly, with green discharge;

(*b*) A single gentle purge will do it.

frequent vomiting; dryness of the skin, heat greater than natural, and greater in some parts than others; interrupted sleep, never refreshing; a feeble cry, calculated to excite compassion.

CCCCIV. The former diathesis, besides other noxious powers, is preceded by the use of good milk, animal food, an abuse of opium or strong liquors; excessive heat after cold and moisture, which latter increases the debilitating effect of the former; a strong set of simple solids.

CCCCV. The latter diathesis, together with the common noxious powers, is preceded by the use of milk from a weak, sickly nurse; that of vegetable food, with sugar in it; watery diet; watery drink; habitual vomiting, habitual purging, both from other means used for the purpose, and particularly magnesia, given with the intention of absorbing an acid; cold not followed by heat; a weak mass of simple solids.

CCCCVI. Consider which of these sets of signs precede or accompany the croup, and whether its pyrexia be sthenic or asthenic. Weigh the different sentiments of authors upon

upon the subject. Suspect their theories, and their facts still more. Be on your guard, that you may not be misled by the vanity, emptiness, and rashness, of young physicians; as well as by the obstinacy and bigotry of the older sort, which increase with their age and practice, and are not to be bent by any force of reasoning, any weight of truth, scarcely by the power of God himself: Regard their minds as bound in the fetters of prejudice: Remember, that a whole generation of physicians were in the wrong, except one man (*i*), and

(*i*) The improvement that Dr. Sydenham made was good for the length it went, which was, to use cool and gentle evacuants for the cure of the small-pox, peripneumony, and one or two more of the sthenic diseases. The bias, in favour of the alexipharmic practice, for the cure of catarrh and measles, he never got over. His theories were vague, but with respect to the practice in the diseases among which his reformation lay, they were innocent. He attained not any idea of the nature of diseases depending on debility; and his practice was hurtful in them: He fell a victim to his gout, which could not have happened had he been acquainted with but one disease of the debility. His practice, even when right, was destitute of principle: He had no sort of comprehension of the doctrine of life as a whole, and as a department of knowledge

and that they persisted obstinately in their error, in the case of the alexipharmic physicians: Reflect within yourself, good reader! whether the present physicians, who follow the doctrines delivered in the schools, are more judicious than their predecessors, and whether they do not run into the contrary extreme of madness, doing as much mischief in fevers, and diseases of pure debility, as the former did in sthenic diseases, and spreading destruction wide among mankind. Thus secured against mistake, consider the methods for treating this disease that have been proposed. If in these, or in any trial that you may make, you shall find that either bleed-

ledge distinct from all others. It would have been lucky, however, for posterity, had his successors done as much in asthenic, as he did in sthenic diseases. From that beginning, the ingenuity of some, at last under a right direction, might have brought out more information, and, by gradual and sure steps, at last attained a comprehension of their whole subject. But professors of universities ruin every thing: For, while they find out nothing themselves, they throw into false lights the useful hints of others. This was the effect first of the Boerhaavian, then of the Hoffmannian and Stahlian doctrines. See our Observations, Outlines, p. lxxxv. to cxlix.

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ing and purging, or antispasmodics, as they are called, that is, stimulants, succeed; then be assured, that, in the former case, the disease is sthenic, in the latter asthenic; of which you may be still more certain, if you shall find that the exciting noxious powers and symptoms, which have been enumerated, at the same time agree with the other marks.

A Description of Catarrh.

CCCCVII. Catarrh is a phlegmasia, in which, to the general symptoms mentioned before (*k*), are added cough; hoarseness; and at first a suppression, or slight increase of the excretion from the nose, fauces, and bronchia, followed afterwards by a further increase; arising from stimulant powers, often from heat alone, but chiefly after a previous application of cold; and to be removed by debilitating powers, often by cold alone, when the access of heat is prevented (*l*).

(*k*) CCCXXI.

(*l*) See par. CXII. CXIV. CXVII. CXXII. and all the stimulant powers, from CXII. to CXLVII.

CCCCVIII.

CCCCVIII. The explanation of the cough is the same as that given before. But it is more free, than in peripneumony, and not suppressed, because there is no inflammation in the neighbourhood to aggravate it, and occasion pain (*m*).

CCCCIX. The hoarseness is owing to a suppression of the vapour that should be exhaled into the bronchia; for when it has remained long, almost without expectoration and cough, or with a moderate degree of them, as long as the sthenic diathesis continued in full force in the bronchia; upon this diathesis giving way, and the expectoration and cough becoming more free, the hoarseness abates, or goes off. That this can be effected by a stimulus of the kind and degree, that constitutes sthenic diathesis, is shown by the effect of long and loud speaking producing temporary hoarseness, by silence removing the hoarseness, and cold water relieving it.

CCCCX. The excretion suppressed is that of the mucus and exhalable fluid, and it ad-

(*m*) See par. CLX. CCCLV.

mits of the same explanation that was formerly given.

CCCCXI. That stimulants produce catarrh is evident from this, that heat alone, fulness of diet, strong drink, and moderate exercise, for certain produce it; cold, cold water, spare diet, and rest, as certainly and effectually remove it. It was, therefore, a very unlucky mistake, to think it arose from cold alone, and was to be cured by heat. On the contrary, cold is never hurtful in catarrh, but when its action is succeeded by that of heat, which phænomenon is to be explained as before(*n*). The occurrence of catarrh so often in summer, where its action can be a thousand times traced back to heat, but never to cold; the influenza never needing the assistance of cold to induce it, which catarrh often does; its never succeeding to pure cold, but immediately to heat, facts known to old women, to shoemakers and taylor, to blear-eyed beggars and barbers, unknown to medical authors and professors, are all circumstances that confirm the same fact.

(*n*) See CXXII.

A De-

A Description of the simple Synocha.

CCCCXII. The definition of simple synocha is the same with that of phrenitis(o), excepting the symptoms affecting the head. It is a slight disease, ending in health often in one day, always in a few days, unless when new noxious powers, either accidentally or from the use of a stimulant plan of cure, have been superadded.

A Description of the Scarlet Pyrexia.

CCCCXIII. The scarlet pyrexia is an exanthema(p); about the fourth day, or later, the face swells a little, and at the same time the skin is here and there marked with a red efflorescence, and then checquered with large spots; which afterwards unite, and in

(o) See par. CCCLXI.

(p) See CCCXXX.

three days end in little scales, resembling bran. This eruption does not arise, but in consequence of sthenic diathesis produced by some other cause.—There is another eruption similar to this, which accompanies an opposite disease, afterwards to be mentioned.

CCCCXIV. The eruption, appearing at a fixed time, and remaining for a fixed time, must be imputed to the fermentation requiring a certain time, which is different in different diseases, and is to be explained in a similar manner as before (*q*).

CCCCXV. The swelling of the face depends upon a greater degree of sthenic diathesis there, than any other equal part. And we are to suppose, that, besides the noxious powers that usually produce it, it is increased by the contagious matter, now approaching the surface.

CCCCXVI. This matter of itself produces no morbid state, only giving the exterior and exanthematic form (*r*), and following the nature of the sthenic or asthenic diathesis.

(*q*) See par. CCCLXVII. and CCCLXXVIII.

(*r*) See par. CCCLXXV.

Hence,

Hence, after its application, the disease that arises is sometimes sthenic, as this, of which we have given a definition, sometimes asthenic, as that disease of which we are afterwards to make mention in its proper place. This view of the subject serves to reconcile the contradictory explanations and methods of cure of authors, who have gone into such controversies to settle its nature.

A Description of the mild Small-pox.

CCCCXVII. The definition of the mild and violent small-pox is the same; excepting that in the mild there are often very few pustules, and that they never exceed one or two hundred in number: Sometimes the place only, which was inoculated, is beset with pustules, without any appearing in the rest of the body; or, besides these, there may be only one upon the body.

CCCCXVIII. The crowded eruption is not occasioned by the nature of the contagious matter, or by its quantity, but by the sthenic diathesis, in so far as it is induced by the

sthenic noxious powers: the contagious matter has very little share in this effect (*s*). If, therefore, that diathesis be prevented, especially upon the surface, the eruption will never be thick; and, after this diathesis has appeared, if it be immediately removed, the eruption will never be dangerous.

CCCCXIX. The contagious matter does not contribute much towards sthenic diathesis for the reasons alleged (*t*); it does, however, contribute something, as is proved by a crowded eruption both appearing and increasing, when the diathesis, after the reception of the contagion, is not increased by the ordinary noxious powers (*u*).

CCCCXX. And, therefore, though the excitement should be reduced below that degree which suits perfect health; there are, however, certain boundaries, beyond which

(*s*) See par. CCCLXX. CCCLXXII. CCCLXXV.

(*t*) From CCCCXVII. to CCCCXIX.

(*u*) This, indeed, is a clear proof, that the matter contributes something, and that there may be a degree of diathesis, compatible with health, unless when it is increased, and the perspiration diminished, by such contagious matter.

we should not proceed in the debilitating process.

CCCCXXI. For, when the sthenic diathesis is very much abated, and the excitement immoderately diminished, there appears over the whole body, an eruption quite unlike the variolous, of a high scarlet colour, and in its progress proceeding constantly from a spotted appearance into a continued sheet of efflorescence, from the top of the head to the ancles (see above par. CCXX. and two notes); which, unless treated upon a stimulant plan, proves fatal.

A Description of the mild Measles.

CCCCXXII. The definition of the mild measles is the same with that of the violent. To this disease all the reasoning that has been employed about the small-pox will apply. If, immediately upon the arrival of the catarrhal symptoms, the sthenic diathesis in a way contrary to every mode of treating this disease hitherto thought of, be removed; frequently no disease of that kind which af-

fects the whole body, will follow. And the disease always proceeds with the same gentleness as the small-pox treated in the same way (x).

CCCCXXIII. The catarrhal symptoms are of the same nature as in catarrh, and admit of the same treatment, that is, the asthenic (x).

CCCCXXIV. Catarrh, and simple synocha, are free from all inflammation, whether general or local. The scarlet fever, and the mild small-pox and measles, are free from general, and exhibit upon the surface a local, inflammation of no consequence (y).

A Description of the Sthenic Apyrexia.

CCCCXXV. The sthenic apyrexia, which are equally free from pyrexia (z), and every degree of inflammation, arise from a sthenic diathesis, that has less effect upon the vas-

(x) All this has been well proved by every one of my children, and by an hundred patients at once.

(y) See par. CLXX. and CCXI.

(z) See par. CCCXXIX.

cular

cular system, than in the other sthenic diseases (a).

A Description of Mania.

CCCCXXVI. Mania is a sthenic apyrexia; in which the mind is disordered, and forms false ideas of every thing.

CCCCXXVII. In so far as mania does not arise from a defect of the substance of the brain, which is a local case that sometimes happens; the powers that have the chief share in producing it, are excessive exercise of the mental function, and a high exuberance of passion. These, however, while they act more upon the brain than any other part, at the same time do act more or less also upon the whole body, though not to the degree of drawing pyrexia after them (b). Which is proved by the disease being cured

(a) So much so, as never to have been thought in any sort connected with that affection we call pyrexia.

(b) Compare this with par. XLIX. L. LI. LII. LIII. and indeed with that whole chapter, as the severest trial of the truth of it; nothing being more natural, than the supposition that a mad man is only affected in his head, but we shall find that not true.

by a debilitating plan, and by other stimuli, as well as those just mentioned, not immediately applied to the brain, but to a distant part of the system.

CCCCXXVIII. The most powerful of those stimuli are, spirituous or vinous liquors, opium, and, perhaps, some other things, taken into the stomach, and first acting there. Of the other sthenic noxious powers, some of themselves, and operating alone, have less effect in inducing mania, and yet, even they, by their stimulant operation, increase the force of those, that have that hurtful effect; as is proved by the effect of removing them in relieving the disease.

CCCCXXIX. If poisons sometimes produce mania, without injuring the substance of any solid part, their operation must be supposed the same, as that of the general stimulants, their effect the same, and the disease a general one, and the same (*c*). But if these very poisons act by destroying the texture of a part, they must be considered as the cause of local disease (*d*).

(*c*) See par. XX.

(*d*) See par. V. VI. XX.

CCCCXXX. The heart and arteries are less affected in mania, than in any of the pyrexial diseases; because the noxious power, which chiefly affects the vessels—too much food—has less concern here. And yet that food, superadded to the other noxious powers, does prove hurtful even in this disease, is evident from a contrary power, abstinence, being, among other remedies, found of very great efficacy in restoring the healthy state. Which, with what has been said above, proves that mania is not a disease confined to a part, but extended to the whole system.

CCCCXXXI. Although, in the diseases that have just been mentioned(*e*), the pulse is commonly said, and believed, to be not at all affected, this, however, is not exactly the truth; for in mania, so long as it continues to be a sthenic disease, that is, so long as it is really mania, more or less of sthenic state can be perceived. The characteristic of hardness of the pulse is never wanting, and therefore also fulness. (See CCCXXXIV.)

(*e*) From CCCCXXV. to CCCCXXXII.

The Description of morbid Watchfulness.

CCCCXXXII. Pervigilium, or morbid watchfulness, is a sthenic apyrexia (*f*); in which there is no sleep, or no healthy sleep, and the mind is agitated with vivid, strong, or uneasy impressions.

CCCCXXXIII. The noxious powers, that produce pervigilium, are the same with those, that produce mania, but inferior in force. It is evidently produced by hard thinking, commotion, or disturbance of mind, more frequently than by other noxious powers. The degree of thought, that has this effect, is not ultimately excessive; for, if it were, by effecting a temporary waste of the excitability, it would produce sound sleep; or if it repelled sleep, it could only act so by inducing indirect debility, the consideration of which is foreign to this place (*g*). The same degree of agitation of mind proves hurtful, in so far as it produces this disease: For every

(*f*) See par. CCCCXXV.

(*g*) See CXLI.

ultimate excess either ends in sleep, or induces that vigilance, of which indirect debility is the cause. But it is not a single operation of the intellectual faculty, or of the state of any passion, or of one that happens but rarely, that proves adequate to the effect. For the effect, in that case, would be either too slight, or of too short continuance, to merit the title of disease. It is only an often returning, or deeply affecting, irritation upon the brain, and, therefore, one that leaves a lasting impression, which has any considerable power in producing this disease. In this last way, an eager, inordinate, and vast desire for the attainment of the objects of ambition, the impulse that hurries on to the revenge of a great injury, the horror that arises upon the perpetration of it, and the fear of future punishment for crimes, are exhibited as productive of strong commotion of mind, in the examples of Cataline, Orestes, and Francis Spira. As often, therefore, as the mind is so excited in its ideas and passions, as not to be capable of being composed to rest and sound sleep, after a certain short continuance of these, or
other

other stimuli; so often are we to conclude, that this disease takes place.

CCCCXXXIV. As the noxious powers just mentioned (*b*) produce this disease; so there are other powers, which belong not to this place, but are to be mentioned, that also repel sleep.

CCCCXXXV. To pervigilium belong all the noxious powers that have been mentioned under mania (*k*), whether acting within or without the brain, but here they act with less force, and yield to the asthenic plan of cure.

CCCCXXXVI. As in this way pervigilium is produced by certain strong stimulant powers (*l*), while the sum of other stimuli remains undiminished, it must be inferred, that the cause of this disease is the same with that of the rest of the sthenic form of diseases (*m*), and that the state of body in which every one of those diseases consist is the same:

(*b*) See par. CCCCXXX. and CCCCXXXIII.

(*k*) See from CCCCXXVI. to CCCCXXXII.

(*l*) See CCCCXXXIII.

(*m*) From CXLI. to CXLVIII.

Nor do different noxious powers, but precisely the same, with only a variation in the proportion of their force, as often happens in other sthenic diseases, precede this disease.

CCCCXXXVII. The same fact is also manifest from the functions; of which, though these diseases are called apyrexia^e or without pyrexial state, the pulse is not altogether free from disease(*n*). On the contrary, it is as much stronger than in health, or in the predisposition to asthenic diseases or in those diseases themselves, as there is more vigour, and more excitement upholding that vigour, in the system(*o*). And the state of the other functions, except those of the brain, which is the part chiefly affected, is truly the same as in the milder sthenic affections, or in the predisposition to these. But, if the brain in this disease, and in ma-

(*n*) See CCCCXXX. and CCCCXXXI. and the note to the latter.

(*o*) For a proof of their vigour maniacs have often four times the strength they used to have in health.

nia, is much more affected than the rest of the body; there is nothing unusual in that circumstance; it being an universal fact, with respect both to diseases and the predisposition to them, that some part is more affected than any other part (*p*).

A Description of Obesity.

CCCCXXXVIII. Obesity is a sthenic apyrexia (*q*); in which, in consequence of an excess of health, rich living, especially in the article of food, and an easy sedentary way of life, the fat increases so much as to incommode the functions.

CCCCXXXIX. That obesity, so defined, is a disease, is understood from the definition of disease (*r*); and that it is a sthenic disease, appears from the certain signs of sthenic diathesis attending it. Of which, the strong action of the stomach, whether the appetite

(*p*) See part first, Chap. IV. and in it XLIX. and LII. CLIX. CCV.

(*q*) See CCCCXXV.

(*r*) See IV.

or

or the digestion be considered (*s*), and the strength of the other digestive organs; are a glaring proof.

CCCCXL. And as in this disease, the stimulus of the exciting powers raises the excitement from the degree consistent with good health, to that which constitutes sthenic diathesis, without which there could not be such force in the action of the stomach, and of the organs that form chyle and blood; so, it is in common to this with the other diseases called sthenic apyrexiaë, that the sum of all the stimuli is much less than in the other diseases of the same form, that is, in those with pyrexia and inflammation; that it never rises to the extreme height at which indirect debility is produced, and that it is never indeed so great as to be sufficient to have any considerable effect on the heart and vessels.

CCCCXLI. But it happens in all those diseases, that both these and all the other functions get somewhat above the standard of health, and a great deal above asthenic diathesis. And the sthenic apyrexiaë differ

(*s*) See par. CCLXII.

from

from the other sthenic diseases chiefly in this, that the exciting powers keep far below that degree of force, that wastes the excitability much; as is perceived from the effect; for they are diseases of much longer continuance than any other sthenic diseases.

CCCCXLII. From which circumstance, however much the brain may be affected by its own proper stimuli; however great the quantity of blood in its vessels may be; unless to the excitement arising from these, there be added that excitement which the other stimulant powers produce, it is certain, that the general effect will be much less, and that the united energy of all the powers has far more effect, than the separate force of any.

CCCCXLIII. The diathesis, then, in these diseases, is, upon the whole, less than in the rest of the sthenic diseases; though that of a part, as of the brain in mania and pervigilium, and of the blood-vessels in obesity, is pretty considerable. The whole is in general as great as in predisposition to the other diseases, and exceeds this degree in the most affected part. Hence it appears, that
the

the sthenic apyrexiaë, compared with the predisposition to sthenic pyrexiaë, but differ from these last diseases, when they are fully formed, in being usually of long duration. This happens because the sum of stimulant operation is moderate, and never consumes the excitability, though it continually produces too much excitement. The great tumult of symptoms in the brain and blood-vessels does not imply a great sum of excitement, because the affection of a part, however formidable, compared with the affection of all the rest of the body, is infinitely inferior in its degree (*t*). However much, then, any stimulus urges a part, and from that spreads at large over the rest of the body; unless other stimuli, applied to other parts, sustain its operation, so that the sum of their operation may deeply affect the whole body; the effect of the solitary stimulus, though it makes a figure in a part, will be less considerable in the rest of the body: In fine, it must be kept in mind, that every violent disease arises from the ex-

(*t*) See par. XLIX. to LII.

citement which the united force of several stimuli has produced.

CCCCXLIV. In these sthenic apyrexiaë, as a certain part, viz. the brain in the two first, and the blood-vessels in the last(*u*), is affected in much greater proportion, than in other sthenic diseases, because the affection of the part is much less supported by stimuli acting upon the other parts ; so the stimuli, acting with such effect upon the most affected parts, are, however, understood to affect the rest of the body, though less considerably. That this is the case, is proved by the absence of asthenic diathesis, in these instances, and by the evident presence of so much sthenic diathesis, as upholds the predisposition to other diseases of the sthenic form ; by the remedies, which affect other parts, as it will by and by appear, aiding in the cure here, and by powers of a contrary nature, always proving hurtful. Whence it is an indisputable consequence, that even here, where it might have been least expected, every stimulus that affects a part, affects the whole body, upon

(*u*) See par. CCCCXLIII.

account of the excitability being one uniform undivided property, diffused over the whole.

CCCCXLV. With respect to obesity in particular, it appears, that the other noxious powers, as well as food, have more or less effect, from the certain fact of the digestive powers, which depend upon the influence of these powers, being here of such force and vigour, as to perform their functions more perfectly in fat persons, than in others, who are, nevertheless, not by any means weak. Yet these noxious powers are applied in a degree short of that, which being ultimately excessive, or very nearly so, puts an end to excitement by wasting the excitability, or which tends, by a high degree of disturbance, to exhaust the body.

CCCCXLVI. Thus the passions are not in such persons too stimulant; a circumstance known to the generality of mankind, among whom it is an adage, *that fat persons are commonly good-natured* (x), while morose persons

(x) This must be taken with more than grains of allowance; since such is the effect of the different motives to human action received from example and education,

fons are for the most part lean. Thus it is observable, that fat persons are averse to thinking, which is a great stimulus (*y*). They are averse to bodily motion, by which all the functions, and particularly the action of the vessels, are much excited, and the perspiration proportionally promoted; and they have this motive for their indolence, that all motion is more fatiguing to them than to others.

that the passions themselves are drawn into a subserviency to every person's predominant pursuit. I have known a person in Edinburgh get great credit for his integrity, though that was not extraordinary, from roughness of manners and an affectation of passionateness, while the dissimulation of that real disposition is the more general engine among men of promoting their interest. At any rate, so much more than mere appearance of temper, which may be so much over-ruled, is necessary to the establishment of maxims; that I should think my life or property upon an insecure footing, if it depended on the good-nature of a person, for which the only security was his fatness.

(*y*) The most poring persons are the atrabilarians, who, though they are not calculated for the elevation of mind that discovery requires, have, by their assiduity, contributed much to the improvement of many of the arts. They are commonly very meagre, indeed, and indefatigable in any pursuit to which they give themselves up.

Hence,

Hence, the quantity of fluids, which during exercise is usually thrown off by the pores on the surface, and thus diverted from the adipose cells, is allowed, during a state of bodily quiescence, to take its course to these cells rather than to the surface of the body.

CCCCXLVII. Having explained the peculiarities of these diseases ; I may observe, that, as the affection of a part, in every general disease, depends upon the general affection, as it is of the same kind, arises from the same exciting powers, and is removed by the same remedies (z) ; it is reasonable to believe, that the affection of a part, whether it be inflammation, or more considerable action of the brain and blood-vessels than of any other part, is not different in different cases, but altogether the same in all ; that it only differs in some circumstances of no signification, and by no means requires a different plan of cure, or affords fundamental distinctions ; and that this mistake, which has had the most per-

(z) See part first, Chap. IV. and particularly par. LIII.

nicious effect upon the art of medicine, must be done away. It is with propriety, then, that I have avoided reducing all the diseases of which I have treated, first to two genera, and after to species; and that without regard either to genera or species, I have referred them to two forms only.

CCCCXLVIII. Further, as in all these last diseases, the whole morbid state, either in so far as it is universal in the system, or confined to a part, proves hurtful by giving too much excitement; and as the remedies, that remove the general morbid state, also remove the portion of it confined to a part, and are never to be directed to a part (*a*), with the view of removing, by their action upon it, the disease, as if all locked up there; by means of this theory we may lay a sure foundation for the establishment of a certain series, or scale, of increasing strength, from perfect health to the most sthenic disease. In that scale peripneumony holds about the highest, and obesity the lowest, degree.

(*a*) See par. LVI. and XCII.

CCCCXLIX.

CCCCXLIX. Peripneumony and phrenitis are followed by two diseases, that sometimes equal them; the violent small-pox and measles. These two are succeeded by a disease, that sometimes vies with them, the erysipelas, when accompanied with a very severe affection of the head. As equal to this, not in danger, but for the most part in the degree of diathesis, rheumatism comes next. Next to rheumatism is marked the mild erysipelas: this is far short of those above it in violence, and claims nearly an equal place with the sthenic cynanche, with which it is much more nearly allied than with any of the former. These are the diseases accompanied with pyrexia and inflammation.

CCCCCL. The two which stand lowest, the mild erysipelas, and the sthenic cynanche or common inflammatory fore throat, are of so doubtful a rank with respect to each other and to catarrh (*b*), a disease which is not accompanied by inflammation; that it is doubtful which of the three should be set highest.

(*b*) See CCCXCIV. and the note to it.

Below them, however, the simple synocha and scarlet fever, in so far as the latter is a sthenic disease, and in so far as the usual state of both is considered, are to be placed without any hesitation (*c*). The lowest part of the scale of sthenic diseases with pyrexia, is assigned to the small-pox and measles, in their mild state.

CCCCLI. Through this whole scale it is not so much the titles and names, but morbid energy, that is regarded; it being the certainty derived from the cause, not the uncertain and perfectly deceitful consideration of symptoms, that was to be considered (*d*). The investigation of symptoms has hitherto been unattended with any advantage; on the

(*c*) The simple synocha is so similar to a gentle typhus, that it requires great judgment to distinguish them at first. The safest way, when the doubt cannot be determined, is to keep the patient in a moderate temperature, and in a state of rest; as any debilitating power, in case the disease should turn out a typhus, would be dangerous; and, though it should afterwards manifest itself a synocha, still its mildness renders the omission of any thing that might have been done, innocent; and it is always easy to take down sthenic diathesis.

(*d*) See par. LVIII.

contrary,

contrary, it has been of the highest detriment to the art; and since it has proved in medicine as productive a source of fundamental errors, as the question about abstract causes proved in the other departments of philosophy (*e*), it must be laid aside, and nosology damned.

CCCCLII. Below the last mentioned diseases are set mania, pervigilium, and obesity. Betwixt which, and the diseases to be mentioned hereafter, the point of perfect health is to be fixed (*f*).

The Cure of the Sthenic Form of Diseases.

CCCCLIII. As to the indication of cure in the sthenic form of diseases, I shall apply that already laid down (*g*), viz. to lower excitement, first to a violent degree of the dia-

(*e*) See par. XVIII. and look into Observations on the different systems of physic, and in it the introduction throughout.

(*f*) It will be easy for the reader, with the directions above, to make out the table for himself.

(*g*) See par. LXXXVIII.

thesis,

thefis, then to a flighter, and to the danger of parts, in fuch a manner, that regard fhall only be had to the degree of force in the remedies (*b*).

CCCCCLIV. When, therefore, we have a violent diathefis, as in peripneumony, phrenitis, the violent fmall-pox, measles, and eryfipelas, immediate recourfe muft be had to the moft powerful and quickly effectual remedy; but fo much blood fhould not be taken, as many who entruft nearly the whole cure of the difeafe to it, think, and commonly praftife; but more, however, than others fuppofe fhould be taken (*i*).

CCCCCLV. No meafure fuits all cafes; the quantity to be taken being different in different cafes, according to the difference of age, fex and ftrength, and to the degree

(*b*) See alfo par. XCII.

(*i*) The moft early among the alexipharmic praftitioners, after once making his efcape from peripneumony without bleeding, fell a victim to the folly of his theory in the next attack. The alexipharmics in general were too moderate in their bleedings in the true, though few, fthenic difeafes that require it, and all in the wrong in their ufe of heating ftimulant prefcriptions in them.

of the exciting noxious powers. In childhood, which, excepting the measles and small-pox (*k*), is seldom affected with the diseases we have mentioned, and in a very advanced age, where there is also less danger than at the flower of human life, small bleedings succeed; because, at both those ages, a less degree of excitement upholds the disease; while in the former the high degree of excitability, in the latter the necessity for more stimulus, or exciting power, than formerly, set bounds to the measure of the remedy.

CCCCLVI. A better rule for limiting the degree of bleeding is the relief, or temporary solution, of the urgent symptoms. If, therefore, after blood has been taken, the great heat, the hardness of the pulse, the affection of the head or of the lungs, and dryness of the surface, shall have gone off, or be much abated; and if the temperature be much lowered, the pulse more soft and less frequent, and the surface of the body more moist, at least less dry; if the pain is every

(*k*) See par. CCCCI.

where

where quieted, the breathing relieved, and the delirium removed (*l*); then it may be looked upon as certain, that enough of the vital fluid has been shed for the time.

CCCCLVII. To obtain this benefit, in the most vigorous adult state 10 or 12 ounces, and much less either before or after that period of life, will for the most part be found sufficient. As this rule will not answer in every case, when it fails, recourse must be had to that, which recommends the abatement of the symptoms as a direction more to be depended upon (*m*).

CCCCLVIII. Since the local affection depends upon the degree of the general (*n*) diathesis, there is no occasion for any particular direction with regard to it, any farther, than to take advantage of its being

(*l*) The references for facts are CLIX. CLV. CCCXXXIV. CLVII. CLXXIV. CCCXLIX. to CCCLV. CLIV. CLIX. CLXXXIV. CCCXXXIII. to CCCXXXVI. CLV. CCCXLIII. CCCLIV. CLVIII.

(*m*) See CCCCVI.

(*n*) See above LVI. and CCCXLII. to CCCXLVI.

accessible,

accessible, in order to help the general remedy by an application of it to the part (*o*).

CCCCLIX. When that has been done, and the first violence of the disease is now broken; we must have recourse to purging, as a great remedy in point of efficacy (*p*). For this purpose, we should not employ violent means, such as many formerly employed (*q*); because the stimulus accompanying this first operation may be hurtful; but it is the gentle cathartics that should be depended upon, such as Glauber's salt, which is highly debilitating, and carries a great quantity of fluids out of the vessels. Though a man of good sense in the last century used cathartics and bleeding on alternate days; yet, if the violence of the disease should be urgent, there is nothing to hinder the use of cathartics the same day that the blood has been taken.

(*o*) Ibid. An instance of such assistance may be the local bleedings over the pained part in rheumatism and the gout, and some other asthenic remedies are aided by local stimuli.

(*p*) See CCLXXXIII.

(*q*) The alexipharmics particularly.

CCCCLX.

CCCCLX. Purging, after a small bleeding, has more effect in overcoming sthenic diathesis, than any bleeding without it; because, as has been mentioned above, in this way the debilitating power (which has always more debilitating effect in the place to which it is first applied, than in any other,) is applied to more parts; and not only to the greater blood-vessels, but also to a prodigious number of their terminations; and the excitability is more extensively, and therefore more equally, diminished (*r*).

ω. Vomiting, which has hitherto been so freely employed in asthenic diseases, where it is pernicious, and in the common practice constantly neglected in sthenic diseases, where it is of the greatest service, comes in here as a proper part of the treatment: it is of the same evacuant nature, acts upon another part of the same canal, and admits of just the reasoning that has been applied to purging.

CCCCLXI. At the same time that the excessive, and therefore hurtful, use of the

(*r*) See par. CCCCLXXXIII. CCCCLXXXVI. also CCCV.

lancet is superseded by these two evacuations; its use is not altogether to be laid aside in the diseases of excessive excitement; because the excitement is often raised by the operation of stimulants so high, as, from the consumption of excitability, which puts an end to its existence, to threaten instant death (*s*).

CCCCLXII. Besides these remedies (*t*), the patient should always be required to abstain from every sort of food but vegetable, which should be taken in a fluid form, as well as from all strong liquors, and indeed from all but watery liquors acidulated (*u*). This direction does not seem to have been so much neglected in words by former writers and authors, as actual application to practice; it having been delivered slightly, by the by, and as if it had been thought of no consequence, so that it made no impression upon the mind of the reader or hearer. No stimulus is more powerful, and, therefore, in

(*s*) See par. CCLXXXI. and CCLXXXIII. CCLXXXIV.

(*t*) From CCCCLIV. to CCCCLXII.

(*u*) See CCLXXXIV.

this part of the practice, more hurtful, than that of the articles of diet: Consequently, whatever quantity of blood is taken from the vessels, whatever quantity of serous fluid is carried off by the mouth and anus, if this stimulus is not effectually guarded against, the effect of all this evacuation may easily be counteracted. Still, however, fluid vegetable matter is not to be forbidden, because such watery matter is not retained in the vessels; but, easily entering the smallest of them, it flows out in all directions by their various outlets; and, at the same time, supports the efficacy of sweating remedies (*x*).

CCCCLXIII. Conjointly with the first bleeding, the first vomiting and purging, with abstinence and watery fluids, it must not be forgotten, that particular regard is to be paid to temperature (*y*): For, if cold always de-

(*x*) This observation seems to me of that sort which suits an hydraulic machine better than the animated system. These weak liquors, in being absorbed, and in being exhaled, must produce much animal action, which, according to the general tenour of Dr. Brown's reasoning, must do mischief. EDITOR.

(*y*) See par. CCLXXXII.

bilitates,

bilitates, and if that is its proper operation (*z*), if it only seemingly acts otherwise, because heat succeeding to its action, or alternating with it (*a*), renders its effect stimulant, if cold alone is adequate to the cure of the small-pox (*b*), or prevents the violence of that disease, if it is the best remedy for catarrh (*c*), and, when heat is avoided, of the greatest efficacy in every sthenic disease; it is not to be doubted, but that it is of the greatest benefit in diseases of the highest sthenic diathesis.

CCCCLXIV. Its operation in the small-pox, and in other sthenic diseases, is not different, but altogether the same. Nay, in all the diseases of this form, as cold alone is sufficient to effect the cure; so, whenever the diathesis, as is the case in the diseases that are our present subject, rises to its greatest height, and demands instant relief; because, in that case, every moment's delay

(*z*) See par. CXVII.

(*a*) See XXXVII. and the addition.

(*b*) See par. CXXI.

(*c*) See CCCCVII.

brings instant danger ; though the remedies, which we have mentioned, are sufficient for the solution of the disease, of which we have direct proof in practice ; though that degree of cold, which would produce the effect, is neither always within our reach, nor can be properly applied by every person ; and many persons might not be disposed to believe its effects so beneficial : We should not desist from the plan of cure here laid down (*d*), but do our best for the patient, by taking off the blankets, and other clothes, by cooling the room, and, instead of laying him on a couch or bed, putting him into a chair.

CCCCLXV. This indeed should, for the most part, be preferred to the application of very intense cold, on another account ; for the shortness of the time in which any one could possibly remain in intense cold, would oblige him immediately to return to a higher temperature, which would produce a greater excitement than he had been under before his exposure, at least too great an excitement (*e*).

(*d*) From CCCCLIV. to CCCCLXV.

(*e*) See XXVI.

CCCCLXVI.

CCCCLXVI. The effect, therefore, falsely imputed to cold, of occasioning the striking in of the measles, is not to be imputed to cold alone, but to heat and other stimuli; giving, as has been explained, more excitement (*f*), than if cold had not preceded. And how can it be otherwise? If cold does not interrupt the eruption in the small-pox; but, on the contrary, by an enlargement of the diameters of the perspiratory vessels, which are shut up by sthenic diathesis, much promotes the discharge of the matter (*g*): Why, in a perfectly similar case, should its operation be supposed different, not to say, diametrically opposite? Must we again have the trouble to refute the false notion that *a cause precisely the same may produce contrary effects*? Cold diminishes the eruption in the small-pox: It makes the eruption disappear in the measles. What then? Take a nearer view of the fact: Is its effect in both these cases to be supposed the same, or different? How do you know, that the matter,

(*f*) See XXVII. and the addition, and CCCLXXX.

(*g*) See CCCLXXVI.

which has disappeared, is driven into the interior parts? What proof will you bring? Confess the truth: and be candid enough to acknowledge, that this is another relic of the alexipharmic doctrine, according to which, the stimulus of heat as well as other stimuli promotes, and cold impedes, perspiration. After a great man had shown the error of that doctrine, both in the small-pox and other diseases (*b*), because he did not carry the application so far as the measles, neither has any one of his followers, who never could step a nail's breath beyond his words. But it might have been observed, if observation had been any part of their employment, that the measles was a sthenic disease as well as the small-pox. Are not all the successful remedies in both of the debilitating kind? And as it was manifest, that in the small-pox also cold debilitated, or, in the common language, acted as a sedative; might not some suspicion, from that

(*b*) In peripneumony he took his patients out of bed, and set them in a chair, for the sake of cooling them, and avoiding the hurtful effect of heat.

very

very circumstance, have arisen in their minds, that cold, in the measles, does not stimulate, or act as an astringent, and repel the eruption, but produces the same effect as in the small-pox? Is it, to such a degree, up-hill work, to use one's own understanding, that a great part of mankind, even those who take upon them the business of teaching and taking the lead of others, in no case ever think of exercising a moment's reflection? —But, it may be contended, that the action of cold is in this case peculiar, because, after the eruption, which it is supposed to check, has disappeared, all the symptoms increase in violence. Consider what that circumstance makes for your argument, or whether it makes any thing for you, and not absolutely against you? Was the action of cold followed by that of stimulant or debilitating powers? If it was by the former, the cause of the mischief must be imputed to them; which, as has been just said, produce excessive excitement after a previous application of cold, and more than without it; if debilitating powers had been applied, then there would be room for suspi-

cion, that cold had a concern in the effect. But it is not so: And, in every case, in which the action of cold has been followed by sthenic diathesis, the true cause was not sufficiently guarding against the stimulus of heat, as well as that of other noxious powers. This is clearly proved by the application of heat being positively ordered, instead of being forbidden, in the common practice. Nor is that to be wondered at: For if the cause of catarrh (*i*) deceived physicians so much, the catarrhal symptoms in the measles could not fail to deceive them. And, if doctrines, discarded in words, are often observed in practice; what was there to hinder this part of the alexipharmic doctrine from meeting with this fate?

CCCCCLXVII. If cold, therefore, can scarce be so managed, that the effect occasioned by the accompaniment, the succession, or the alternation, of stimulants, can be prevented, whether that be the fault of the physician, or owing to the nature of the thing (*k*);

(*i*) See from CCCCVII. to CCCCXII.

(*k*) Turn back to CCCCLXV. and CCCCLXVI.

it is, notwithstanding, a rule in common to the measles and other exanthemata of the same stamp, to avoid heat, and compensate for the degree by the greater duration of cold, and to guard with all possible care against every stimulant power. It is now then most evident, that the opinion of cold being peculiarly hurtful in the measles, both in that and every other disease of the same form, falls to the ground.

A Repetition of the Cure.

CCCCLXVIII. After using the remedies which have been directed (1), if the symptoms recur, the same train of medicines must be again gone through: Blood must be again taken, emetics and purgatives again administered; nor must we desist from the use of the refrigerant and attenuant plan: And all these means must be employed, till the tumult of the symptoms be allayed, and the

(1) From CCCCLIV, to CCCCLXVIII.

healthy state, at least for the time, be restored; and perhaps the repetition may be required a third time or oftener: After which,

CCCCLXIX. If the diathesis seems now nearly removed, if the affection of the head, of the lungs, or any internal one that may be present, seems alleviated or repelled; and yet there is some apprehension of the return of the disease; recourse must be had to more moderately debilitating powers. Sweating, the stimulus accompanying the first operation of which, as the diathesis is now rendered mild or removed, the body will be able to bear, should be preferred to bleeding, vomiting, and purging. But before I proceed to speak of it, it seems proper to say a few things concerning the sum total of blood that should be taken during the course of the whole disease.

CCCCLXX. As in single bleedings, so also in the whole quantity of blood to be taken, the sum should be a mean betwixt the quantities, which the common run of physicians approve, while some think it too much, some too little. The reason for this
recom-

recommendation is strengthened, by the consideration of there being now less occasion for shedding a great deal of the vital fluid, since the cure is more divided among the other remedies that have been inculcated. The age must be regarded, as was formerly recommended (*m*), the former mode of living must be attended to, the quantity of stimulus, that may have immediately preceded the morbid state, must be considered, and the habit of the body compared with the degree of the symptoms and the effect of the treatment. From these circumstances a judgment should be formed of bleeding and other evacuations; and it should be estimated, what further treatment of the same sort may seem proper, and what difference of management may be required. Upon the whole, it will be found, that there will be the less occasion for any one medicine, the more freely others have been brought into use; and it will be understood, that the danger of too great evacuation will be thereby avoided, and health better secured (*n*).

(*m*) See CCCCLV.

(*n*) See CCLXXXVI. and CCCV.

CCCCLXXI.

CCCCLXXI. With respect to the manner of bleeding, blood should always be taken from a very large vein; because the cutting a smaller one, or opening an artery, does not afford a sufficient quantity for the relief of the vessels, and arteriotomy is further attended with inconveniencies (*o*). As far as any certain rule, in an affair admitting of such variety, can be established, two pounds of blood in three or four days, with the assistance of the other remedies, will, for the most part, be sufficient at the middle of life, and less at a more early or later period.

CCCCLXXII. Bleeding should be always followed by vomiting and purging, so long as any considerable part of the sthenic diathesis remains; nor should the other parts of the treatment, that have been pointed out, be neglected. But cathartics, of which a single dose can at any time bring back a fit

(*o*) The blood is ready to break out again after the tying up; and if, as some advise, the arterial twig should be cut through, it diminishes the number of the few accesses to this mode of bleeding; neither does there seem to be any use in destroying such vessels, especially as no good reason can be shown for doing so.

of

of the gout; which cure the sthenic cynanche or common inflammatory fore-throat, and the mild erysipelas, when even the face or head is affected; which are of manifest detriment in fevers; which, in dyspepsia, in asthma, and every sort of diseases depending upon debility, whether direct or indirect, do great and palpable mischief; and form a great part of the very bad common method of treatment in the whole form of asthenic diseases; in proportion as they ought to be avoided in all such diseases, should be as certainly employed in sthenic diseases; they should never be omitted in any considerable one, such as those that require bleeding, but be managed according to the directions lately given. We should, above all things, be on our guard against that diffidence in the use of this remedy, as well as of vomiting, where they are serviceable, and that confidence in them when of disservice—both errors introduced by the spasmodic doctrine, and both therefore admitted upon a false and absurd principle(*p*).

CCCCCLXXIII.

(*p*) The principle, at least with respect to purging, was, that it diminished perspiration, and, therefore, was understood

CCCCLXXIII. As nothing in asthenic diseases has been more used than these two modes of evacuation, nothing with more hurt, and often with instantaneous destruction; so, for this very reason, nothing is more successful in the cure of sthenic diseases.

CCCCLXXIV. It is scarce credible, how far the aversion to the alexipharmic method of cure has had the effect of branding the very best medicines, what a misapplication of them it has suggested, and to what a degree it has perverted their proper use. Not to repeat what has been formerly said; sweating, which is of the highest service in every moderate sthenic diathesis, and in every degree except the highest, or where it presses upon any organ of importance to life; that is, in all the diseases of this form, except in the beginning of those of which we are here treating, has, however, of late been com-

understood not to act as an antispasmodic. A balance betwixt the excretion by the belly and that on the surface was talked of, and they were held for opposite operations. In such theoretical nonsense they deserted their only good leader, at least in those diseases, who alternated his bleedings and purgings, and, as I have found, upon the best authority.

pletely

pletely banished from the cure of them all except one, not only as useless, but as hurtful; which has chiefly happened since the spasmodic doctrine began to be received into this country, and during the few years it continued to gain ground (*q*).

CCCCLXXV. But, in truth, besides rheumatism (which sweating, at least as produced by one medicine, is allowed to cure), if it most certainly either relieves or removes the sthenic cynanche, erysipelas itself, and catarrh, and the simple synocha, in proportion to the more free or sparing use of it; if that be known to the very vulgar, and most certainly to physicians of every other (except the spasmodic) school; what reason, what well-ascertained fact, will any one bring to show, why sweating should not be universally used, after the very violent sthenic diathesis is much diminished by other medicines, and is now reduced to the degree, to which this remedy is adapted; what eloquence would be requisite to bring any man of sense to such a persuasion?

(*q*) Turn back to CCCCLXIX.

CCCCLXXVI.

CCCCLXXVI. He will say, that the heat, which accompanies the first part of the operation of sweating, may be hurtful; for, as he never made trial of it, he has it not in his power to say, that for certain it will be hurtful(*r*). This is readily admitted in an high diathesis, threatening indirect debility(*s*); but it cannot also be granted, that in a moderate degree of the diathesis, either

(*r*) It is laughable to hear such persons talk of their practice, from which they never can receive information; it being not the effect of any thing they know themselves, but what they have been told by others. In that way, without any exercise of judgment, without a single observation, that they can call their own, in the course of a long life, do they jog on, like the blind beggar led by his more faithful dog, or, like children in the play of blind Harry, groping about with their eyes tied up, through the whole course of a practice boasted of, God knows, by nobody who knows it but themselves.

(*s*) If the diathesis should rise within two or three degrees of indirect debility, in that case the heat of the first part of a sweat, by exhausting the little excitement that remains, may have a most hurtful effect. But if the diathesis be any where below that high point, the addition of stimulus can be borne for the short time of its continuance; and be afterwards much more than compensated by the large and continued flow over all.

original,

original, or effected by other remedies, and, consequently, after the plan of treatment, that we have laid down, has been executed, such heat will not be compensated by the great profusion of fluids taken away from the whole surface of the body; or that, when this part of the vascular system has been freed from a violent stimulus, the diminution of excitement will not be more equal in all the vessels, and over the whole nervous system. If the numerous vessels, that open into the intestines and into the stomach, afford such an opportunity to diminish sthenic diathesis, how is it possible that a similar evacuation in the similar perspiratory vessels should have no tendency to produce the same effect? To which reasoning if the facts just related be added, what can any person have to say against the use of sweating, if a degree of heat, not greater than what cannot be avoided in the operation, can no longer be hurtful, and if the sweating itself is certain to be of great service (*t*)? Let the spasmodic caviller against the

(*t*) In an excitement of sixty-seven, within three degrees of indirect debility, the heat in the first part of the sweat,

the use of that remedy in the cases of sthenic affection where it is admissible, muster up all his facts and all his theories, let him turn himself into all shapes, he will never produce a solid argument against this remedy.— But what, again, is the tendency of all this disputation? Will there never be an end of running from one extreme of error into the opposite? Shall no mean be found betwixt the alexipharmic plan of cure, and one equally bad or worse? If that doctrine hesitated not to prescribe sweating in the rage of a peripneumony, and that too procured by means of the most heating stimulant powers; does it therefore follow, that a plan of treatment must be admitted, which rejects the certain and safe use of this remedy, when excited

sweat, by adding these, might kill the patient, if you will, without leaving any chance of relief from its evacuant effect. But, if the excitement be no higher than 60° , the addition of the three degrees will keep greatly within the point of indirect debility, and, therefore, be safe; while the succeeding evacuation may reduce the excitement perhaps 10° , and bring it within the range of predisposition; and a new course, or a little prolongation of this, carry it down to the point of health, and finish the cure.

by

by the most gentle means? If it was the opinion of Dr. Sydenham, that heat should be avoided in the cure of sthenic diseases, which was quite right, as heat certainly increases the excitement; are we, for that reason, to avoid that tolerable degree of heat, which accompanies a remedy the most powerful in restoring the healthy state, and, thereby, deprive ourselves of great benefit upon the whole? If such persons do not know, that several remedies diminish excitement more powerfully than one; and, if they are to be excused for their ignorance; are they also to be excused for not seeing, what any empiric might have seen, that some things are of service, and others of disservice; is such want—not of genius, for genius is not required of them—but of common sense also, to be pardoned? If to think for themselves, and to make any sort of discovery, was too much to be expected from them; is it not somewhat surprising, that out of a thousand writers, who have treated of every part of medicine, and entertained different sentiments from one another, they could squeeze no information, but always trod in the footsteps of one single man?

CCCCLXXVII. Sweat, therefore, after the management that has been described, is to be excited; especially if there should seem something still wanting to the complete return of health, some degree of sthenic diathesis still remaining, and a spontaneous tendency to sweating should appear.

CCCCLXXVIII. When the signs of a spontaneous sweat are perceived, nothing more is to be done, but first to lay the clothes about the patient, remove the sheets, put the blankets next to his body, guard against the approach of air, and keep up the discharge for a sufficient length of time, at least ten or twelve hours. If from this management there shall ensue a copious and universal flow of sweat, there will be no occasion for giving medicine for the purpose.—After sweating has increased the relief formerly procured; if it should disappear towards the end, it should at last be supported by Dover's powder, or by laudanum alone; at the same time the body should be covered, so that it may get as quickly as possible to the surface, till the expected benefit be obtained. If a draught of cold water be sometimes

sometimes given, and then the body be well covered up and properly managed, the effect often succeeds to our wish. But, as in the other cases, that belong to this part of our indication, the sweating must then only be set on foot, when the mediocrity of the diathesis, procured by the other remedies, will permit; so in the small-pox and measles, because there is occasion for a certain time to allow the matter to pass off, we must keep this circumstance in our eye, and never be too early in making trial of this remedy. Lastly, if the heat should happen to prove hurtful, if at any time the flow of sweat should be attended with less relief, or with inconvenience, it should be immediately stopped: For it was not for no purpose, but for that of making the remedies supply the defects of one another, and of reducing the excitement more equally over the whole body, that a number was recommended.

CCCCCLXXIX. In all the cases of a violent diathesis, all the remedies that have been mentioned, are, more or less, differently on different occasions, in proportion as the remaining diathesis may require, each in a

higher or lower degree, or in a larger or smaller quantity, to be brought into play, and the curative circle enlarged.

CCCCCLXXX. Some slight medicines, such as acids and nitre; some of uncertain use, such as leeching, cupping, and blistering, are mentioned in writers, as of the first consequence. Of these, the acids, in so far as they render the drink more agreeable, and, in an affection of the lungs, do not produce cough, but prove, in a certain measure, refrigerant, are to be permitted; especially if there should be a desire for them. Every body ought to know, that the refrigerant power of nitre is less than is commonly thought. In rheumatism, and the sthenic cynanche if this should be unusually severe, blisters, leeches, and cupping-glasses, applied in the neighbourhood of the inflamed parts, may, in some measure, be of service. Nor does there seem to be any reasonable objection to the application of a cap of recent earth to the head in phrenitis.

The other Part of the Indication of Cure.

CCCCLXXXI. To pass on to the other part of the indication of cure (*u*): When there is a gentler diathesis, as in the other phlegmasiæ, and in those sthenic affections, of which the treatment has not yet been considered; as in the mildest state of erysipelas, of the sthenic cynanche, in catarrh, simple synocha, the scarlet fever, and the mild small-pox and measles; a smaller debilitating power is required; and, therefore, neither all the remedies that have been mentioned, nor in general so much of each, as in the other diseases of this form, are requisite.

CCCCLXXXII. In all these cases, not even with the exception of rheumatism, which depends upon an high diathesis, bleeding is unnecessary; and in all, with the exception of rheumatism, bleeding to any extent is hurtful: For, when the excitement is not

(*u*) CCCCLI.

very great, but, on the contrary, is moderate, scarce exceeding that degree that produces the predisposition to other diseases, it is absurd to make use of a very debilitating power, by way of a remedy, as if we had to combat a very violent disease. And, since the intention in bleeding is to prevent an ultimate excess of exciting power from producing a cessation of excitement, an event of which there is not the least danger in a moderate diathesis, such as that which is the cause of the diseases in question, the treatment should be adapted to the cause, and bleeding should be either abstained from altogether, or very sparingly used.

CCCCLXXXIII. It is not, therefore, only in diseases of debility, which belong to the other form (in most of which it has, nevertheless, been, and still is, the custom, to spill more or less of the vital fluid); but also in all the diseases of this form, except the very violent ones, that the lancet is to be proscribed.

CCCCLXXXIV. Though in rheumatism the diathesis often runs considerably high, the usual profuse bleeding is not, however, required.

quired. For, as every diathesis is always greater in some parts than in any other equal part, so it is with the sthenic diathesis in this case; which is found much greater upon the surface of the body, than in any other equal space within. The reason is, that the most powerful noxious agent, heat succeeding to cold, or so alternating with it, that its own stimulus is increased by the cold (*x*), exerts its principal energy on the surface of the body. Hence, after excessive bleeding, the disease often obstinately recurs. The reason of the recurrence, if the principles of this doctrine be well understood, cannot be obscure. Bleeding diminishes the sthenic diathesis chiefly in the red vessels, less in any of their extremities, least of all in the perspiratory vessels, and in those disposed in the tract of the muscles, because the operation of bleeding is counteracted by that of heat: This explanation is confirmed by the certain testimony of physicians; who often complain that their favourite remedy fails them.

(*x*) See XXXVII. and addition.

CCCCLXXXV. Hence sweating is remarkably adapted to the cure of this disease : To sweating, therefore, after a previous bleeding to twelve ounces, and with attention to the rule of temperature and diet before given, we must have immediate recourse, if the diathesis happens to be considerably violent, which appears from the heat of the body, the pains raging most in the night time, and from a strong and hard pulse. In order to render the sweat universal and of sufficient duration, it should be excited by Dover's powder, or laudanum, as before hinted, and kept up for twelve hours in full flow, and then some hours longer, or till the abatement of the symptoms, in the form of moisture or free perspiration, and repeated when the symptoms return. The rest of the cure must be entrusted to low diet and an exact temperature.

CCCCLXXXVI. In this disease, after the sweating, and also in the case of a simple synocha, of the scarlet fever, of the sthenic fore-throat, of catarrh, erysipelas, and the gentle small-pox and measles, when the diathesis is somewhat considerable, but far short
of

of the case first considered; we should use either a very small bleeding, and then chiefly the evacuations before mentioned (*y*); next a slight sweat ought to be kept up, not longer than for eight or ten hours; and, during the whole time of the cure, we should enjoin abstinence, weak liquors, rest of body and mind, and cold, except at the time of sweating, and even then the heat should be as low as possible, as formerly directed: The united use of these means is perfectly equal to the removal of any of these diseases; but there will not always be occasion for them all.

CCCCLXXXVII. Often so mild a diathesis occurs, that one or two of them, once or twice employed, is sufficient for the cure:—In a slight diathesis, that is, one in which, unless for a little at first, the shivering, languor, and heat, are so inconsiderable as to indicate a proportional slightness of diathesis upon the surface; in which there is scarce any lassitude, which indicates a similar moderation of diathesis in the organs of voluntary motion; in which the vigour of the

(*y*) See CCCV.

stomach

stomach remains so as to manifest a moderate excess of excitement in it; in which, in fine, the other functions are sufficiently regular, and only suffer conspicuously in the affected part—In such a case, a single purge of Glauber's salt, and, without that, cold, rest, and abstinence, have often reduced the morbid excitement to its salutary degree. A thousand times has the sthenic cynanche, a thousand times catarrh and the simple synocha, nay, erysipelas itself with affection of the face, been so removed. And the scarlet fever is often so mild as to yield to the same management.

CCCCLXXXVIII. In this way must a constant regard be had to the degree of excitement and diathesis in the method of cure, and terms must be often disregarded. It was with a view to the treatment, that the simple synocha was before distinguished from the phrenitic, and the gentle erysipelas from the violent. For the same purpose it may be remarked, that catarrh often rises to such violence as threatens or brings on a peripneumony; and that peripneumony itself is sometimes much slighter than usual. Under these circumstances,

circumstances, it is the degree of excitement alone, that ought to govern the physician, without regard to names.

CCCCLXXXIX. Another useful caution here is, to judge of the state of the pulse, of the temperature upon the skin, and of the skin in other respects, with due attention to these principles. The frequency of the pulse in all sthenic diseases is moderate: With that there is conjoined some hardness and fulness. Whenever, therefore, the pulse is very quick, it is to be suspected, that the sthenic diathesis has passed into the asthenic, the excessive excitement into a cessation of excitement, or that the disease has been a sthenic from the beginning. To remove all doubt, the habit of body, and the age, must be considered, and an inquiry be made, whether the disease has been preceded, or not, by contagion. Heat of the skin is common to these diseases and to fevers, which are diseases of an opposite stamp, and therefore is a doubtful mark. As it depends upon an interruption of perspiration, from whatever source, it is never to be strained into a proof of the state of excitement. And, since dryness of the
skin,

skin, which is common to diseases so different from each other, in the asthenic diseases depends upon debility ; in order to judge of this symptom, the other symptoms, and the exciting noxious powers, should be considered. In fine, the only inquiry should be, whether the excitement is abundant or deficient, and all the signs should be consulted with that view ; nor are we to judge rashly from any peculiar form the affection may have assumed.

CCCCXC. When, therefore, the signs, that have been enumerated, are compared with all the others and with the diathesis, we are to set about either the antisthenic or the stimulant plan of cure. The violent sthenic diseases, which we first considered, can scarce be confounded with the asthenic ; the more mild are daily confounded with them. But, though it is easy to distinguish these from asthenic diseases resembling them ; should any person think the marks of distinction ambiguous, let him be informed, that, upon account of their mildness, though the disease under examination should be sthenic, blood is not to be let, for fear they
should

should turn out asthenic; in which so debilitating a power is destructive, as has often already been said upon former occasions; let him also understand, that his method of cure, conducted in this way, will be secured from all dangerous mistakes. For, if the diathesis, though sthenic, be slight, bleeding will often precipitate it into the opposite; it will at the best be useless (*z*). If, on the contrary, the disease that passes for sthenic, should, in its progress, show itself evidently asthenic; in this case, every drop of blood that may have been taken will go to the increase of the disease (*a*). Yet this pernicious practice daily sends more men out of this world, than all the plagues of human life (*b*).

(*z*) Suppose the diathesis be two degrees above the highest of the points of predisposition, at 57° ; and bleeding to the degree of producing 35° of debilitating influence be employed; it is evident, the excitement will go down not only the 17° necessary to bring it to the point of health, but sink to 22° , that is, 3° below the range of predisposition to asthenic disease, and therefore complete the conversion of the sthenic into an asthenic disease.

(*a*) See CCLXIX. CCLXXXI. CCXC.

(*b*) See par. CCCCVI. towards the end.

CCCCXCI.

CCCCXCI. As abstinence, cold, and the management of the bowels, are sufficient in a gentle state of the small-pox ; so, when the proper preparatory plan has been neglected, and the eruption is thick, trial must be made also of the other remedies (*c*), except sweating. This must be avoided, because the stimulation accompanying it, by increasing the sthenic diathesis on the surface, would tend to check the perspirable fluid, and detain the contagious matter under the scarf-skin, and produce that pyrexia, which is symptomatic of the inflammation, and is called *the secondary fever*. This peculiarity of treatment is taken from the peculiarity of the symptom just mentioned, and forms no objection to the principles of this work. In confirmation of which, it may be remarked, that, though there is all the proof that can be derived from sure practice, the remedies we have mentioned are sufficient ; yet, before the eruption comes on, nothing can be objected either to sweating or bleeding, as remedies applicable to this in common with

(*c*) CCCCLIII. to CCCCLXVIII.

every

every other sthenic disease(*d*). In fine, the success of low diet, cold, and purging, is certain; but at the same time, the other remedies, that remove sthenic diathesis, likewise operate to the same effect(*e*). It was proper to say so much for the sake of showing the unexceptional steadiness and universality of the principles of this work. Nor are we to imagine, that the small-pox and measles differ from other sthenic diseases attended with pyrexia, except in the particularity of their eruption, in running a certain course, and not admitting of a speedy cure.

CCCCXCII. We are not to wait for the arrival of the symptoms of debility, that follow violence of diathesis, and threaten certain death by inducing indirect debility, with the view, forsooth, when they have

(*d*) The small-pox is, in one word, to be treated as any sthenic disease, according to its degree of morbid state, and the eruption is only to be regarded during the period of its existence, either with respect to the exception of sweating then, or of any thing else.

(*e*) It is not, that low diet, cold, and purging, operate by any peculiarity, but because they debilitate to the degree, and in the manner required, of the other remedies.

taken

taken place, to cure them. On the contrary, they ought to be prevented by the early administration of the remedies so fully considered. Should that be omitted, the consideration of the diseases that will be the consequence must be referred to the asthenic form, to which it altogether belongs.

CCCCXCIII. As often as sthenic diathesis happens to be conjoined with the pyrexia, which is induced by the operation of stimulants, of acrid substances, of compression, of obstruction, and similar noxious powers acting upon a sensible part, of which we have examples in gastritis, enteritis, nephritis, cystitis, hysteritis, hepatitis, or the inflammations of the stomach, of the intestines, of the kidneys, of the urinary bladder, of the uterus, of the liver (*f*); the diathesis, as it aggravates the pyrexia, should be removed by its respective debilitating remedies. When neither the sthenic nor the asthenic diathesis is present, nothing should be attempted. But, if the asthenic diathesis should be present, which may very readily happen ;

(*f*) See LXXXI. LXXXIII. LXXXV. LXXXVII.

the

the stimulant plan should be proceeded upon, to prevent a very dangerous disease(*g*). Nor, when this is as much as possibly attended to, are we to forget, that, in so doing, the principal affection is not touched; that, on the contrary, it is its effect, not its cause, that is tampered with; and that the full consideration of such cases belongs to the local diseases, afterwards to be taken notice of.

(*g*) As asthenic diseases are to sthenic ones in the proportion of ninety-seven to three of the hundred; such also must be the frequency of predisposition to them: The inference from which is, that as we are seldom in the most perfect state of health, and consequently, for the most part, under some degree of predisposition, all the chances are greatly in favour of that predisposition being the asthenic one. Hence, the impropriety of treating all local diseases in the same way, and as if they were general sthenic ones. Death has been too often the consequence of that practice, when the local fault, for which it was intended, was no more, perhaps, than a thorn pushed under a nail, a cut, or contusion of a finger. In such circumstances, however fully the person may have lived, wine is withheld, fluid vegetable matter prescribed, and the routine of every species of evacuation gone through. Dismal are the consequences of gun-shot wounds on this plan of cure. Turn back to the paragraphs LXXX. and LXXXI. and the notes subjoined to them.

CCCCXCIV. Besides all the remedies now mentioned, it is of advantage in every degree of diathesis to keep the mind easy and unruffled; a practice that in the very high degrees of the diathesis is indispensably necessary. Our attention should especially be directed to this particular, when we observe, that the stimulus of thinking and of passion, carried to a great height, has had a share in the production of the disease.

CCCCXCV. In mania, therefore, and pervigilium, this direction must be particularly, and as much as possible, attended to. In the latter of which diseases, thinking, and every state of commotion, and more certainly an habitual practice in them, must be shunned, especially before going to bed. When the patient is resting there, he should have stupid books read to him; all inordinate desire, the propensity to revenge, the remembrance of every degree of criminality, of which he may have been guilty, should be diverted from his recollection (*b*).

(*b*) See above CCCCXXXIII.

CCCCXCVI.

CCCCXCVI. This fact is of great consequence to give corroboration to this whole doctrine: it is confirmed by this other, that the same things, which are serviceable in per-vigilium, or the morbid watchful state, are also serviceable in mania, or madness, only they must be administered in a higher degree, as that is a disease of a higher degree of excitement. Thus, it is not ease and tranquillity of mind that are to be prescribed here, both of which are quite gone, but a state opposite to that high commotion of spirits and irregular vigour in the exercise of the intellectual function. And, as an excessive energy of the intellectual powers, or of the animal spirits, or both, are the most noxious powers in this case; the patient should be struck with fear and terroure, and driven, in his state of insanity, to despair: As a remedy against the great excitement of the organs of voluntary motion, the labour of draught-cattle should be imposed on him, and assiduously continued; his diet should be the poorest possible, and his drink only water (*i*).

(*i*) See CCCXXVIII. CCCCXXX. CCCCXXXV. CCCCXXXVI.

The patient should be immersed in water as cold as possible, and kept under it for a long time, till he is nearly killed.

CCCCXCVII. If, in phrenitis the brain, in peripneumony the lungs, in rheumatism the external joints, possess more diathesis, than any other part; why may not mania and pervigilium consist in a stronger affection of the brain, upon which the principal noxious powers act, than of the other parts, over which the influence of those powers is less considerable? Lastly, since remedies, the first action of which falls upon other parts, are of service in those diseases (*k*), it is certain, that not even in them, where you might be most disposed to believe it, the whole morbid affection depends upon the part conspicuously affected; but that the whole body is concerned; that the excitability is one uniform undivided property over all; that the force both of the exciting noxious powers, and of the remedies, is exerted on the whole system, with the inequality so often mentioned (*l*); and that the foundations of this doctrine are sure and stable.

(*k*) Part I. Chap. II.

(*l*) Part I. Chap. IV.

CCCCXCVIII. As these are the principal noxious powers in mania and pervigilium, and as the brain is principally affected; so, in obesity, the most considerable noxious powers are animal food (*m*) and rest, or sedentary life; in consequence of which last, the stimulus of exercise, which, by wearying and fatiguing the body, tends to indirect debility, is obviously wanting. But, since, in consequence of using the same food, both in quality and quantity, and the same indulgence in rest and ease, some persons become fat, others continue lean; it appears, that all the digestive powers have more force in the former, than in the latter, and, consequently, that the other exciting noxious powers have contributed to the effect, and that a proportional excitement follows. Of the noxious powers, that belong to this place, moderate

(*m*) Because no effect can arise without a cause, the exciting powers, therefore, must here have operated with more force, than in the other case; and if it should be objected, that the circumstances in both cases were equal, the difference then must be set to the account of the greater vigour of the excitability in the case of obesity.

exercise of the intellectual faculty, and tranquillity of mind, which are gentle stimuli, favour obesity; over-strained thinking, and habitual indulgence in any passion, such as that of anger, the repetition of which constitutes ill-nature, oppose it. Corporeal motion, which diminishes the quantity of fluids in the system, and, as often as it is considerable, proves fatiguing and debilitating, opposes it. Equally unfavourable to it is hard drinking; which, in a similar manner, wears out the excitement, by constantly wasting the excitability by the high degree or long continuance of its stimulus. On the contrary, the powers that favour obesity, are those that act gently, and with some excess; but never attain the high degree of activity, that inclines to indirect debility: They are powers that go on softly and pleasantly, particularly that keep up moderation in the perspiration, and thereby fill the vessels with blood; but, because motion is avoided, they do not very much increase the excitement of the vessels, and by means of the tranquillity of their action, allow a fluid, that would otherwise pass off by the external pores,

pores, to turn aside into the cells of fat. Hence, though, as has been said before, abundance of blood is indeed a very great stimulus; yet, without other stimuli, and that most powerful one, which muscular motion affords; it is evident, that a considerable degree of stimulus can be borne, without any considerable disease, and that it always produces a predisposition to sthenic diseases, but does not immediately bring them on. Hence we perceive what place in the scale of excessive excitement, or of sthenic diathesis, obesity holds; what the degree of stimulant power is, and what the stimuli in particular are, that produce it.

CCCCXCIX. As the degree of curative force must be accommodated to the degree of force in the morbid cause (*n*); it may be observed, that for the cure also of this disease the common indication is sufficient (*o*); that is, that the excess of excitement must be reduced to the salutary degree, and a re-

(*n*) See CIX.

(*o*) XLVIII. CCCCLIII.

medy opposed to every noxious power, equal to the removal of it.

D. In this case, therefore, as food is the principal noxious power, the quantity should be reduced, and more exercise taken. These means are sufficient for the cure (*p*).

DI. But, for the sake of the further confirmation, as well as illustration of this doctrine; it is to be observed, that all the powers, which affect the excitement in a greater degree than the noxious powers inducing this disease, and that have a tendency, by their stimulant operation, to indirect debility, have the same effect; that they either prevent or cure obesity, and continue to produce this effect, till they induce that degree of meagreness which is connected with debility.

DII. The best method of lowering the diet, is to combine a quantity of vegetable matter with a moderate portion of animal food. The next rule is, to refrain from the latter, and use the former in greater abundance. The first rule is suitable to all such persons as are liable to diseases of debility,

(*p*) CCCCXCVIII.

as the gout, the indigestion that after a long time succeeds to luxury, to asthma, epilepsy, and other such diseases. The latter is more accommodated to those, who otherwise enjoy great vigour, have predisposition to sthenic pyrexia, and are in the flower of their age. But, it is not, even in the latter state of the body, to be followed for a long time together; because, so great is the debilitating influence of such a diet, that, while it is sufficient to remove any degree of obesity, especially with the addition of exercise, it is found to have signal efficacy in producing asthenic diathesis, and all the diseases depending on it.

PART THE FOURTH.

THE SECOND FORM OF GENERAL
DISEASES;

OR

THE ASTHENIC DISEASES.

C H A P. I.

DIIL. **T**HE form of asthenic disease, which may be called *asthenia*, for the sake of distinguishing it from the form of sthenic disease, which may be called *sthenia*, is a state of the living body, in which all the functions are more or less weakened and often disturbed: it is almost always attended with a conspicuous affection of some one function. In treating of asthenia, I shall proceed from the slightest disease of this kind
to

to the most violent, through all the intermediate degrees.

DIV. In this part of our subject, there occurs a great variety of symptoms. Of this variety, however, as it affords no certain information, and is even fallacious, no use will be made in marking the scale of diseases. But, for the sake of placing what is about to be delivered in a clearer, if not a more plausible, point of view, we shall begin with a simple enumeration of the principal diseases that are afterwards fully treated of.

DV. The asthenic diseases are emaciation, inquietude or restlessness without sleep, asthenic amentia, the scabby eruption, slight diabetes, asthenic scarlet fever, the rickets; the hæmorrhœæ or general bleeding discharges, such as menorrhœa or a morbid excess of the menses, epistaxis or bleeding from the nose, hæmorrhoids or the piles; and also three morbid states seemingly in appearance opposite to these, the loitering, impaired, or suppressed menstruation; next come, thirst, vomiting, indigestion, diarrhœa, and colic without pain; after these, the affections of children, as the worms, the general consumption
called

called tabes, dysentery and cholera in their mild state ; angina, the scurvy, the mild hysteria, rheumatalgia, asthenic cough, cystirrhœa or mucous discharge from the bladder ; the gout of strongish persons, asthma, cramp, anasarca, dyspepsia with pain, the violent hysteria, the gout of weak persons, hypochondriasis, dropsy, chin-cough, epilepsy, palsy, the lock-jaw, apoplexy, tetanus ; lastly, fevers, as the quartan, tertian, and quotidian, intermittents or remittents, dysentery and cholera in their violent degree, synochus, simple typhus, the gangrenous fore-throat, the confluent small-pox, the pestilential typhus, and the plague.

DVI. Of this scale of asthenic diseases it is to be understood, that those diseases, which in their usual state are slight, and claim a higher place in the scale, are sometimes more severe and sometimes extremely violent ; and those, that in their most common state are severe, such as the gout of weakened persons, pestilential fevers, and the plague itself, sometimes proceed with the utmost mildness (*a*).

(*a*) See par. CCCCI.

DVII.

DVII. The affections of parts, which often accompany these diseases, such as ulceration, tumour, increased excretion, bleeding, discharge, inflammation, spasm, convulsion, indicate indeed some degree of debility, but the same degree may exist without them. Hence, because it is the influence of debility that is fundamentally regarded in this scale; the diseases, that are often accompanied with local affections, as hysteria and the cramp, are intermixed with diseases unaccompanied by local affection; and, with the cases of asthenia that are accompanied with spasm and convulsion, dropsy is associated, on the supposition of an equal degree of debility; so that throughout no regard is paid to remarkable symptoms, but the degree of debility only is kept in view. Neither is the violent cholera excluded from its place among fevers, which are distinguished by failure of intellect and by affections of the head, because this kind of cholera shows a degree of debility equal to the febrile diseases. The idea in this distribution is to show that true morbid energy does not consist in an affection of parts, but of the whole body; and
that

that the restoration of health is not to be attempted by a change of the state of parts only, but, without neglecting that, by a change in the state of the whole system.

Of Emaciation.

DVIII. Emaciation is an asthenia, less discernible in the other functions, but evident in the weakness of the digestive function; whence, the system, though receiving proper aliment, does not become plump.

DIX. As the cause of this disease is debility, both in the rest of the system, and in the stomach and other organs of digestion; it follows, that the general indication of cure should be chiefly directed to the most languid part, that is, to the organs of digestion and the perspiratory vessels. More nourishing food, therefore, should be used, less labour undertaken, and too free perspiration should be prevented by more rest of body, by proper gestation, and friction: and a plan, exactly the reverse of that which is suited to the cure of obesity, should be pursued.

Of

Of restless Watching.

DX. In the *asthenia*, called *inquietudo* or restless watching, the other functions are under some degree of languor, and the patient is affected with a constant propensity to change his posture and toss about his limbs, without being able to fall asleep.

DXI. As the cause in this case, just as in other general diseases, is universal over the system; so it affects the organs of voluntary motion, and the brain in particular, with the inequality so often mentioned already (*b*): Consequently, to remove the disease, ultimate excess in either mental labour, or exertion in any passion, as well as the opposite extreme of deficiency in either, should be avoided; excessive corporeal labour when it has proved hurtful, as well as indolence when it has had any concern in producing the disease, should be guarded against; and the proper medium betwixt the extremes of ex-

(*b*) See par. XLIX.

cessive activity and indolence restored: Or the disease should be repelled by wine; and other stimuli should have each its proportion in the treatment.

Of the scabby Eruption.

DXII. In the scabby eruption, the face is pale, the skin discoloured, dry, lank, and variously disfigured with pustules; there is also a lowness of spirits, and the functions of the body are weak and sluggish.

DXIII. In this case, though the debility is universal, it is most considerable in the perspiratory vessels. And, therefore, the chief circumstances in the treatment are,—together with the remedies directed to the whole system, such as nourishing food and strong drink,—to support the perspiration by its respective remedies; to bathe the surface of the body in tepid water, to render it accessible to air, to order clean linen for the patient, and to have every thing clean about his clothes.

Of the mild Diabetes.

DXIV. In that asthma, which is named the mild diabetes, there is an excess in the quantity of urine discharged, but the profusion is not immoderate as it is in the violent case of the same name. The organ of perspiration labours under the same weakness and sluggishness, as in the scabby eruption.

DXV. To remove this affection, which is much more frequent than it has been hitherto supposed, the system should be stimulated by food (*c*), by strong drink (*d*), and by proper exercise (*e*), such as is neither immoderately excessive, and therefore debilitating, nor deficient in degree, and therefore not affording stimulus enough: Above all things, the perspiration should be sustained. The contrivances for checking the flow of urine, which have no existence, are to be omitted.

(*c*) See par. CCLXVI.

(*d*) See CCLXVIII.

(*e*) CCLXX.

Of the Rickets.

DXVI. The rickets is an asthenia; in which to the general symptoms are added an unusual bulk of the head, especially the fore part, and likewise of the knees and abdomen, a flatness of the ribs, and meagreness.

DXVII. The rickets is a disease of children; it chiefly arises from uncleanness, want of dandling or exercise, cold either without moisture or with it, food not giving sufficient nourishment, or bad air.

DXVIII. For its cure the common asthenic indication must be employed; remedies, of an opposite nature to the noxious powers that excite the disease, must be looked out for; the surface of the body should be kept clean (*f*), the perspiration should be carefully restored by the stimulus of pure air and of heat; the child should be more carefully dandled, and kept much in the open air,

(*f*) See DXIII.

animal

animal food should be administered, vegetable withheld, and strong liquors allowed (g).

Of retarded Menstruation.

DXIX. Retarded menstruation is also an asthenia; in which, besides this discharge not making its appearance at that time of life when it should, other evidences of debility, such as a slender make of body, weakness, laxity of habit, want of appetite, or a craving for things not alimentary, paleness of the skin, and similar symptoms, appear.

Of impaired Menstruation.

DXX. Impaired menstruation is that state of asthenia; in which, after it has appeared, and the flow continued for some time, the discharge is made in too sparing quantity, or at too long intervals, with other signs of weakness accompanying it.

(g) See CCXCV. CCCIII.

Of the Suppression of Menstruation.

DXXI. Suppression of menstruation is that degree of asthenia, in which the discharge is totally stopped at any period betwixt its natural commencement and the natural time for its total cessation.

DXXII. An inquiry must be made concerning the cause of natural menstruation, before it would be proper to enter upon an investigation of the retardation, or deficiency, of the discharge in any of its degrees.

Of the Cause of Menstruation.

DXXIII. The cause of menstruation is a certain conformation of the vessels that pour out the blood in this discharge, which takes place at a certain time of life, that is, about the age of puberty, and a stimulant energy in women, more powerful than in the females of other species of animals.

DXXIV. Of other animals there are very few, the females of which undergo any sort
of

of menstruation except at the time of the venereal orgasm.

DXXV. As all the vessels are gradually unfolded in the course of the growth of the body, so the same thing happens to the genital and uterine vessels, but last of all to these. The ends of the latter, terminating on the sides of the uterus, are so very much expanded about the age of puberty, as to transmit first the serous part of the blood, and then, after an effort kept up for some time, to pass complete blood.

DXXVI. At this time of life a great change over the whole system takes place. Now the desire for coition, a stimulus never experienced before, produces a commotion over the whole body; and in the genitals of both sexes more than in other parts: In the female this commotion is felt over the whole region of the ovaria, uterus, and vagina. The uterus (its seat) being almost incessantly solicited by this stimulus, is the more powerfully affected; as there is more excitability, hitherto acted upon by no such stimulus, existing in the system. Hence, not to mention other organs, the muscular fibres of the

contiguous vessels, as well as the nerves interwoven with them, are thrown into the highest degree of excitement. This excitement, increasing over the whole system, again increases that in the uterus. The mutual contact of the sexes, whether in kissing, in shaking hands, or otherwise, fires both sets of genitals, and the uterus in a remarkable manner; but the actual embrace produces that effect in the highest degree. The remembrance of each embrace remains, renews the idea of the pleasure, and continues more or less to excite the uterus.

DXXVII. This new affection is cherished by every stimulus that is usually applied to the system: Hence, in the absence and in the presence of the beloved object, and at all times, scarce with the exception of that which passes in dreaming, a stimulus so steady, and so much the more powerful, as its novelty implies, that the excitability in this case is entire, rouses the fibres of the vessels, already sufficiently unfolded, to violent contractions. The blood is carried into the region of the uterus with great rapidity, increasing in proportion as the blood, by powerfully distending
ing

ing the vessels, and agitating them by its impetuous flow, stimulates the fibres more and more, and thereby increases the action by which it is impelled. This is the first cause of menstruation: In this way, two circumstances—a sufficient enlargement of the diameters of the vessels, and the stimulus acting more powerfully from its novelty upon the unwaisted excitability (*b*)—are adequate to the whole effect.

DXXVIII. This state is not of a different nature from other states of the body, but bears an analogy to some well-known cases: Thus, different vessels, from the mere difference of their diameters, are subservient to different purposes: The perspiratory vessels are destined to the transmission of a vapour, the excretory vessels of the alimentary canal to that of a thin fluid, the renal vessels to that of a grosser one; these instances, therefore, should take off our surprise at finding vessels fitted, by their wider diameter, for the purpose of transmitting red blood.

(*b*) See DXXIII.

DXXIX. The reason why the females of other animals do not menstruate but in their orgasm, is, they are only at certain times exposed to that energy of stimulus which produces menstruation.

DXXX. How much is owing to this stimulus in the production of menstruation, is further evident from the following chain of facts: 1. The less addicted to love women are, the less they menstruate; 2. The more they give way to that passion, the more freely do they experience this discharge within certain boundaries; 3. Before puberty, and after the period when menstruation ceases (when the fitness for effective love has either not yet commenced, or is now passed), the menstrual discharge is constantly wanting; 4. The privation of enjoyment, which, by its debilitating effect, produces chlorosis and other similar diseases, is remarkable for bringing on either a menorrhœa, or a retention of menstruation; 5. Girls who are of a forward growth, have great strength, and large limbs, and consequently are sooner ripe for love, are also more early in menstruation; while those who are weakly, puny, and of a small size,

size, and, consequently, later in attaining to the period of puberty, are proportionally late in attaining the first menstrual discharge; Lastly, if, like all the other functions, that of love is limited at the same time in its duration and degree; and if, as the commencement of the love embraces is more or less early, it is proportionally more early or late in coming to its final termination, and if the duration of menstruation does not usually exceed that period; these facts also, added to the others, give weight to our conclusion, and show, in a clearer point of view, how much menstruation depends upon the venereal emotion. It may, therefore, be repeated, that, besides the confirmation of the vessels, suited to the function of menstruation, and the stimulus which has been mentioned, there is occasion for no other circumstance to explain either the commencement, establishment, or continuation, of the menstrual discharge.

DXXXI. The cause of full menstruation, and that of a moderate degree within the boundaries of health, is the same, only differing in degree; the degree of the latter being smaller, and that of the former greater.

DXXXII.

DXXXII. And, as the circumstances, mentioned above, explain, why women menstruate more than the females of other animals ; so their immoderate operation upon some women serves to show, why their effect, the menstrual discharge, then becomes greater than natural (i).

DXXXIII. The stimuli that produce abundant menstruation, short of morbid state, are unchaste ideas, and a high energy of passion. In this way, the influence of books, conversation, or pictures, calculated to kindle up lustful appetite, and the uncovering of parts that modesty conceals, which all produce a lively imagination of the thing so much desired, can be indistinctly felt by none perhaps but eunuchs. Nourishing food, and generous drink, and high-seasoning, produce the same effect ; hence the proverb, without meat and drink love starves : Likewise, that degree of exercise, or even labour, that does

(i) Women menstruate more than other females, because they are subjected to a higher degree of the stimulus, which is its cause ; and such women as are exposed to more of the same stimulus than others, will also experience more of the effect, precisely upon that same principle.

not

not prove fatiguing, but keeps within the boundary of stimulant operation; as also an abundance of blood, both from due exercise and from rich diet; lastly, frequent and ardent enjoyment, or *inconcessa hujus imitatio*; all these increase the menstrual discharge, in proportion to the high decree of their stimulus, but still do not carry their effect to morbid excess.

DXXXIV. The same conclusion applies to the effect of these stimuli, which was formerly applied to an over-proportion of blood producing sthenic diathesis: For, if excessive menstruation and an increase of love be the consequence of the excess of the stimuli, one or other of the following must be the effect; it will either be such as remains within the latitude of health, or such as first produces sthenic diathesis, and then, in a higher degree, rapidly brings on indirect debility.

DXXXV. That this is the fact, is proved by the noxious powers that produce excessive and morbid menstruation; and by remedies, that are stimulant and suited to fill the vessels, removing the disease, according to our late discovery;

discovery ; and also by the unfortunate issue of the debilitating evacuant plan of cure in the same diseases.

DXXXVI. As it is stimulant operation that produces both proper menstruation and that which goes to a little excess ; so, when once menstruation is established, the conformation and stimulus remaining are sufficient to support it. The same operation is renewed during every interval of menstruation : The stimulus acts and quickens the motion of the blood in every part, but chiefly in that where it is most powerful and most required for the effect, that is, in the region of the uterus : The blood thrown into quick motion, and rushing with a more rapid flow, increases the stimulus which is the cause of this acceleration : And, as this mutual stimulus continues incessantly to affect women through the whole interval, when they are allowed scope of love ; the uterine vessels are gradually dilated, till at last, within three weeks, or a lunar month, they are opened at their extremities : And, when the fluid, which is first ferous for a little, and afterwards sanguine, and afterwards ferous again

again for a little, has flowed one, two, or three days, the vessels at last close.

DXXXVII. During the whole time of this process, the more excitability there is—consequently at the beginning of each menstrual effort—the more violently the stimulus acts, and produces proportionally more excitement: And it has, from this time, always less and less effect to the end, in proportion as the excitability is more wasted; though, till the excitability, in so far as it has a relation to this stimulus, is altogether exhausted, the stimulus always adds something to the sum of excitement (*k*), though constantly less and less. The same explanation applies to the operation of food, of drink, and of all the exciting powers.

DXXXVIII. What has been said of the stimulus, productive of menstruation, is conformable to the effects of all the other stimuli. It is also conformable to the whole sum of menstrual effect from the time it begins till it entirely ceases. Thus, at the beginning of this long period, the force of

(*k*) See XXXVI.

stimulus is far the greatest, upon account of its novelty, and the unwasted state of the excitability that relates to it. At this period, above all others, love in persons in health is exquisite; and, in consequence of the stimulus which excites it, menstruation, when once established, is most exactly performed; that is, it does not, either from deficiency or excess, deviate into morbid state.

DXXXIX. But when now the office of menstruation is fully established; because in this, as well as every other function, the excitability is gradually diminished in the progress of life, the stimulant power also has gradually less, and, at last, no effect: Consequently, in the same gradual way, the power of love in women, and, in proportion, that of menstruation, is diminished, and at last altogether extinguished.

DXL. While both the faculties, that of love as well as that of menstruation, in this manner decrease from their beginning to their abolition, menstruation is often interrupted, as in pregnancy, in suckling, in the diminution or suppression of menstruation. This interruption in the two former cases is natural,

tural, and consistent with health ; but in the diminution or suppression of the menstrual evacuation, it becomes morbid.

DXLI. Since the stimulus, together with the conformation of the vessels, is the cause of menstruation, and the latter depends upon the former ; so again the defect of the stimulus, and, therefore, of the conformation, produces both the retardation, diminution, and, at last, the complete suppression of the discharge.

DXLII. Whether ever the defect of menstruation, like that of perspiration, or of an internal excretion, as that in the fauces and alimentary canal, is to be imputed to sthenic diathesis, is uncertain, for this reason ; that, while the diameters of the small vessels on the skin and in the intestines are more capable of such a contraction for a reason formerly assigned (1) ; so great a force of excitement or so high a degree of sthenic diathesis, as would be sufficient to shut up vessels destined to the transmission of blood, is not easy to be conceived. And the doubt is further in-

(1) LVII. LXII. CXII. CXIII.

creased by a certain fact; which is, that both in the retardation of the menstrua, and in all the degrees of their diminution to their total suppression, when local affection is out of the question, there are evident signs of a debilitating cause.

DXLIII. In order to establish this point, which is of the greatest consequence, as it directly affects the method of cure, and, if not explained, would leave a gap in our principles; we have to observe, that, though some men, in consequence of the stimulus of excessive love, excited by a most beautiful woman, have, by means of sthenic diathesis, been so inflamed as to fall into a temporary fit of impotence, and been cured by bleeding; besides the infrequency of the occurrence (*m*), it is not very probable, that the large uterine vessels can be so contracted in their diameters, as to become incapable of transmitting their fluid. Nay, facts contradict the supposition: The symptoms arising from the retardation or deficiency of men-

(*m*) I remember one instance in Dr. Whyte, and I think I have only heard of another.

struation receive a temporary alleviation from the debilitating plan of cure ; but the discharge is not usually brought back ; on the contrary, it is more retarded. But, allowing an over-proportion of blood and an excess of stimulus to be the cause of the first deficiency of menstruation, after it has been removed by bleeding and the rest of the debilitating plan of cure, can this over-proportion and excess be the cause of a disease, which resists a degree of evacuant and debilitating operation, that would cure ten peripneumonies ? And since any stimulus, as well as that of an over-proportion of blood, may, from its excessive force, induce indirect debility ; why may not the same thing happen in a disappointment in love, and on occasion of the first deficiency of menstruation ; and, in both cases, atony, ushering in manifest debility, and not excess of tone, be the cause ? As peripneumony, where the over-proportion of blood and sthenic diathesis is by far the greatest that ever happens, in consequence of indirect debility passes into hydrothorax ; why may not a similar cause in this case produce a similar effect ?

DXLIV. The cause, then, of deficient menstruation, whether partial or complete, is a languid excitement over the whole body, especially in the uterus, from a deficiency of the stimulus of love (*n*), and of all those stimuli that support it (*o*), and from a penury or under-proportion of blood.

DXLV. This appears, because the noxious powers mentioned in the retardation of menstruation, and other debilitating powers in every deficiency of that discharge, produce each disease; it further appears, from the restoration of the just quantity, in consequence of the stimulant and replenishing plan of cure, and also from the hurtful effect of the debilitating plan of cure (*p*).

DXLVI. The remedies for the cure of retarded menstruation are, rich food, generous drink, gestation, exercise accommodated to the strength, pediluvium and semicupium, or the warm bath of the lower extremities, and gratification in love (*q*).

(*n*) DXXIII. DXXVI. DXXIX.

(*o*) DXXVI. DXXVII. DXXXII. DXXXVII.

(*p*) DXXXV.

(*q*) DXXVI.

DXLVII.

DXLVII. The same remedies are required in cases of suppression, and the same, but inferior in their degree of force, for the diminution of menstruation: When there is an unusual violence of the disease, either in degree or duration, we must have recourse to the assistance of the diffusible stimuli.

Of Menorrhœa, or the excessive Discharge of Menstruation.

DXLVIII. Menorrhœa is an effusion of blood from the uterus, or too copious menstruation, or too long a continuance of it in a more moderate degree of the excess, accompanied by all the symptoms of asthenia.

DXLIX. This disease is occasioned not by an over-proportion of blood, not by a vigorous state of body, but by an under-proportion of the former, and an exhaustion of the latter. The noxious powers, therefore, that produce it, are food not nourishing enough, or in too small proportion, watery liquids, or that over-proportion of pure strong liquors that produces indirect debility, ex-

cessive heat, or cold when its debilitating operation is not counteracted by any stimulus, and falacity.

DL. Its remedies are the reverse of the noxious powers; rich food, generous liquors, heat acting within its stimulant range, cold kept from inducing direct debility by the stimulus of heat and other stimuli, and gratification in love.

DLI. The effect of the noxious powers and remedies of which we have spoken, that of the former in producing, and of the latter in removing, the disease, and the failure in success of the debilitating plan of cure, all confirm the doctrine.

Of Epistaxis, or Bleeding from the Nose.

DLII. Epistaxis is an asthenia; which, besides having the general symptoms, is distinguished by bleeding from the nose without any force behind—an affection troublesome at any age, but particularly to young persons in a state of rapid growth, and to enfeebled old age.

Of

Of Hæmorrhoids.

DLIII. The characteristic of hæmorrhoids, or the piles, is a flow of blood from the anus, or the parts around it, added to other signs of asthenia.

DLIV. The same nearly, that has been said of menorrhœa, is to be said of the noxious powers and remedies of this disease.

DLV. The cause of the piles is manifest, from the noxious powers that produce it, the remedies that remove it, and the unhappy effect of the common asthenic plan of cure; that is to say, it is debility of the whole body, from the deficiency of other stimuli, and chiefly that of the blood(*r*). This debility, while it relaxes all the vessels, and impairs their tone, produces that effect, in a special manner, upon the affected vessels. The reason is, that, in consequence of the inequality so often mentioned, the cause chiefly operates in the seat of the urgent

(*r*) See par. DXLIX.

symptoms(*s*). Nor is it to be thought wonderful, that the blood should flow through the vessels of the uterus that are patulous and in the habit of pouring out blood, through the pendulous hemorrhoidal vessels, and through those of the nose, which are delicate, and weakly supported, in preference to others. In this case plethora, which has no existence(*t*), is equally unnecessary to our reasoning(*u*).

Of Thirst, Vomiting, and Indigestion, as well as the kindred Diseases of the alimentary Canal.

DLVI. There is a very frequent affection, beginning with thirst and proceeding to vomiting(*x*). It often proceeds no farther than these symptoms; it oftener ushers in the most severe affections, such as sometimes

(*s*) See XLIX. L. LI.

(*t*) See par. CXXXI. CXXXIV. and the addition.

(*u*) CCXXXII.

(*x*) CLIX. CLXXXV. CLXXXVI. and CLXXXVII.

dyspepsia,

dyspepsia, or indigestion, sometimes colic, sometimes the gout, sometimes proper fevers, and many other asthenic diseases. Its most frequent source by far is weakness, from too long suckling and sometimes from the diarrhœa incident to women wasted both with a long course of suckling and by repeated pregnancies.

DLVII. There are two affections which have only one name between them, viz. thirst: The one is sthenic, the other asthenic (*y*). The former arises from the stimulus of salt, of rich and plentiful meals, of heat and labour, and some others; never ending in vomiting till the sthenic state is over, and this happens but seldom. Its cure, with which we have here no concern, is cold water and the several debilitating powers.

DLVIII. The asthenic thirst, which is our present subject, depends always on pure debility, sometimes indirect, sometimes direct (*z*). Its tendency is always to sickness,

(*y*) CLIX. CLXXXV. CLXXXVI. and CLXXXVII.

(*z*) CLXXXV.

and, as that increafes, to vomiting (*a*); and when the vomiting becomes any way confiderable, the confequence is that moft acute pain, which a cramp in the ftomach produces (*b*), and the other affection formerly explained (*c*). This progrefs is fpontaneous, direct, and for the moft part rapid.

DLIX. The noxious powers here are all debilitating. The indirectly debilitating powers are, debauch in eating and drinking (*d*), drunkennefs, extreme fatigue, ultimately exceffive heat (*e*), violent paffions (*f*), exceffive exercife of the intellectual faculty (*g*), debilitating food (*h*), an over-proportion of blood converted into an under-proportion, together with the converfion of the fthenic diathefis that attended the excefs into the afthenic, the infeparable attendant on the diminution.

(*a*) See CLXXXVII. CLXXXVIII.

(*b*) See par. CLXXXIX.

(*c*) CXC. to CXCIV. and from that to CXCVIII.

(*d*) CXXVIII. CXXX.

(*e*) CXV.

(*f*) CXLI.

(*g*) CXXXIX.

(*h*) CXXVIII.

The following powers act by a directly debilitating operation; cold not counteracted by any stimulus (*i*), cold water, vegetable food (*k*), penury of blood (*l*), of other fluids (*m*), want of pure air (*n*), anxiety, grief, fear (*o*), and, in fine, that weakness of the system, which arises from all these. The affection is often of a mixed origin, from a combination of both these sorts of noxious powers: For, as direct debility always increases the indirect, so does the latter the former, both in this and all cases (*p*).

DLX. The corruption of the common mass of fluids, whether it be called acrimony, or putrefaction, has no concern here; because, while life remains, and the action of the vessels upon their respective fluids continues, such a state of the fluids cannot become general; it being only the effect of the cessation of motion of the fluids and of heat;

(*i*) CXXII.

(*k*) CXXVIII.

(*l*) CXXXIV.

(*m*) CXXXVII.

(*n*) CXLVI.

(*o*) CXLII.

(*p*) XLVII. LXXI.

nor

nor can it happen, but in the extreme vessels and excretory ducts, which, by their atony, do allow such a cessation of motion, and likewise in the alimentary canal.

DLXI. The common cause of every asthenia, predominant in the throat and stomach, upon account of the atony of the salivary, and other excretory ducts, is the cause of this thirst.

DLXII. Its remedies are also the common remedies of every asthenia; they should be accommodated to the degree of debility. In a slighter degree of this thirst, a glass or two of brandy, or of any similar spirit, or, which is a better rule, given till the complaint is removed, is sufficient. It should be either pure, or diluted with a very little hot water (*q*). It should be followed by eating some animal food (*r*); and the effect should afterwards be

(*q*) The addition of cold water counteracts, that of hot co-operates with, the effect, which has been ascertained in a thousand trials.

(*r*) When the thirst was but just coming on, and not yet established, I have found a hearty breakfast carry it off. But when it is come to a head, the mixture of sickness, that now begins to take place with it, renders eating impracticable.

supported

supported by other stimulants taken moderately, and in the degree that suits good health. After which the proper practice is, to proceed to the use of the permanent stimuli.

DLXIII. When the thirst is not quenched by these means, and vomiting, as it soon will, comes on; and when excruciating pain supervenes upon the vomiting; which, when the pain is not present, is an affection, that, together with the symptoms that have been mentioned (s), should receive the appellation

Of Dyspepsanodyne, or Indigestion without Pain:

And when, besides the pain of the stomach, now induced, the affection going downward to the intestines, sometimes produces a loose, sometimes a bound, belly; at other times only a loose belly, and at others only a bound one; which is an affection, when unaccompanied by costiveness, that is distinguished by the title

(s) From DLVI. to DLXII.

Of

Of Diarrhœa :

DLXIV. And, when accompanied with costiveness, is entitled to the denomination

Of Colicanodyne, or Colic without Pain :

DLXV. In all these cases recourse must be had to a larger dose of the strong liquors : And, when that does not succeed to our wish, we must next fly to opium, and other more diffusible stimuli, if they are to be found : When, by these, relief is procured, rich and pure soups, without fat, should, from time to time, be administered, and the canal carefully bathed all over with them. Afterwards, the other stimulants should be added ; in the use of which, a straight course between direct and indirect debility should be held, without the least deviation towards either : And our efforts must always be continued till the disease is radically removed.

DLXVI.

DLXVI. The necessity for this direction in the cure is so much the greater; as, by neglecting it, or depending upon the common purgative debilitating plan, the consequence is, that a proper general disease often degenerates into a local affection. To proceed to the consideration

Of the Kindred Diseases of the Alimentary Canal.

DLXVII. Among which, besides those that have been mentioned above (*t*), there remain others, which, when compared with them, both as to the nature of the affection and of the treatment, absolutely claim this place in the scale.

Of the Diseases of Children.

DLXVIII. The diseases of children are, dryness of the skin; sudden flaver, or salivation of short continuance; a similar rejection

(*t*) From DLVI. to DLXVI.

of milk without effort (*u*) ; green scouring ; at other times costiveness ; both commonly attended with gripes ; of which the usual sign is, a pulling up of the knees towards the stomach, with very severe crying ; unequal heat : A little more severe than these are the two following cases, the one of which has the name

Of Worms.

DLXIX. Which are distinguished by a thickening of the columna nasi ; by a custom of picking the nostrils ; by loss of complexion ; by paleness of the face and of the rest of the skin ; by a swelling of the belly ; and, lastly, by the discharge of worms by stool. The most distinct symptoms of the other affection, or

Of Tabes, or the general Wasting of the Body,

DLXX. Are meagerness all over the body, an unusual bulk of the abdomen, almost con-

(*u*) See CCCCIII.

stant watching, such a weak, distressed, assiduous, and hoarse manner of crying, as is peculiarly calculated to excite tenderness and compassion.

DLXXI. The noxious powers, producing all these affections, are common to them with every asthenia; that is, they are every thing that has an effect of debilitating the whole system, and especially the alimentary canal: Such as, at this age, milk not nourishing enough, and at the same time acedcent and flatulent; want of food, or diet of watery matter and bread; cold, and moisture, the latter increasing the effect of the former; habitual vomiting and purging; too little dandling; unseasonable sleep, and meals, and every part of management; nastiness; impure air; a neglect of natural likings and dislikings.

DLXXII. The remedies are the converse of all these; nourishing, exciting milk; three or four meals a day, consisting chiefly of warm milk, pure animal soups, not weak, with a mixture of flower or bread of the same kind; heat without being carried so far as to produce

duce sweat, or too much redness, and without moisture; laying aside every sort of evacuation; a great deal of dandling and gestation; a proper timing of sleep, of food, and of every part of management of these delicate systems; cleanliness; tepid bathing in moderately cold weather, and cold bathing in warm; pure air; being out in the fields as often as possible in all but moist weather; and such a judicious attention to desires and propensities as not even to neglect gently scratching any part that itches (*x*).

DLXXIII. These directions suit the milder cases under consideration. They ought not by any means to be neglected; at the same time others are necessary for the more violent cases. In the green scourings, great looseness, or costiveness, recourse must be had to pure wine, to spirits, more or less diluted as the occasion may require, or, if there should be need, not diluted at all: More of the soups above mentioned, and also of a richer kind.

(*x*) See above DXVIII.

DLXXIV.

DLXXIV. If these means should not succeed to the physician's mind, which will seldom be the case; in these affections, more certainly in worms, and still more certainly in the tabes, or general consumption, with the remedies that have been spoken of, the more diffusible stimuli of opium and musk should be alternated. Both sorts of remedies, the durable and diffusible, should be so accommodated to the violence of the symptoms, as not to be dropped till the whole morbid tumult is allayed, and the healthy state restored; which will, upon trial, be found more practicable, than has yet been imagined from the employment of the contrary plan of cure, to the great comfort of mankind in their sufferings.

DLXXV. From what has been said it will appear, that these affections of children, all flow from the same cause, are removed all upon the same indication of cure, as any other asthenia, or disease of debility, that has either yet been, or is to be, mentioned in this work. The unhappy termination of them, heretofore, is to be imputed not to their cause, but to the ill-advised methods

commonly employed for their cure (*y*) : Nay, when they degenerate into local affections, as in the instance of tabes or general consumption, ending in an obstruction of the mesentery ; in that of colic at any age, terminating in an inflammation, tumour, or twisting of the intestines ; and in those of both colic and long-neglected diarrhœa, running into a gangrene in the same part ; this is a misfortune that never happens, when a proper method of cure is early enough used to remove the primary disease : And, on the contrary, it most commonly arises from injudicious treatment, or from the neglect of this, which is the proper one. To the kindred diseases of the alimentary canal (*z*) further

(*y*) I cannot help repeating again, because the importance of the subject calls upon me to do so ; that the practice of the new plan of cure, in all the diseases of children, as well as in the others lately spoken of, has ever succeeded in my hands, as well as in those of my pupils, to a miracle. I cannot say that ever I met with an instance where it could be said to have failed. Let then who will compare that account with the known mortality that is every day the result of any other practice yet thought of in the profession.

(*z*) From DLXVI. to the present paragraph.

belong

belong the two following ones, under the title

Of the gentle Dysentery and Cholera.

DLXXVI. To these, every thing that has been said of the former, will apply: Or, if there be occasion for any particular observation upon them, it will be given after we come to treat of them in their more severe and violent state: Of a similar nature to all these, but of a degree so much more violent, as to merit the next place in rank below them, and, at the same time, not unconnected with them, as having the seat of its predominant symptom in the alimentary canal, is the disease to which I have given the name

Of Angina.

For the symptoms and method of cure of which turn back to number CCXXII. where it is introduced, in the explanation of asthenic symptoms.

Of Scurvy.

DLXXVII. Scurvy is an evident asthenia : The principal symptoms are, want of appetite, loathing of food, laxity of the living solids considered as simple solids ; an oozing of blood, both from other parts, and particularly from the gums ; aversion to labour ; low spirits, and a languor in all the functions.

DLXXVIII. The noxious powers producing this disease, are the common asthenic ones, appearing in the following form. It is cold, but conjoined with moisture in the northern seas, and, as we may well suppose, in the parts of the southern ocean of the same temperature, that generally produces the peculiar form of the disease. But all the other debilitating powers contribute their share : Such are, grief for the loss of liberty, relations, kindred, and friends ; a horrid dislike to the present state of life ; a longing desire for that which they have parted with ; the awe which the severity of discipline keeps them

them in; the effect of a calm, where there is nothing to do, producing direct debility on them; a storm, where they have to labour above their powers, as certain a cause of indirect debility; their not having been allowed, till of late, fresh meat, which is the only nourishing and invigorating (*a*) form of it; their being kept upon salted and spoiled meat, not even corrected by recent vegetable aliment, such as that is (*b*); watery or small drink; the terrour which the expectation of a battle at sea inspires.

DLXXIX. All these particulars prove, that scurvy is so far from being the effect of one or two noxious powers, and from resting upon so narrow a basis, as has hitherto been imagined; that it is rooted in a multiplicity of debilitating powers, and is a real asthenia, or universal disease of debility.

DLXXX. This inference is confirmed by both the true and false method employed for its cure: For, though nearly all the common powers concur in the production of scurvy;

(*a*) See CXXIV.

(*b*) See CXXVIII.

if, however, it be considered, how easily, upon the removal of the noxious powers, and upon the patient's getting a-shore, the disease is subdued, by fresh meat, either with or without greens, by wine, gestation, and exercise; in fine, by the return of his usual manner of living; it will be impossible to entertain a doubt of its being an asthenia, but by no means a violent one. The pretence of its cure being effected by greens, roots, sour crout, and similar things, which have been so much commended lately, though, without the remedies just now enumerated, they could not fail, by their debilitating operation, to aggravate the disease, is derived from a noted blunder among physicians, by which they are led to overlook the most certain, simple, and evident facts, and take up, in place of them, the greatest falsehoods, or such facts as have a very narrow foundation in truth.

Of the mild Hysteria.

DLXXXI. The mild hysteria is a form of asthenia, of frequent occurrence among women,

women, but very rarely happening to men; in which a noise is heard in the belly, and the patient has a sensation of a ball rolling within the bowels, rising up to the throat, and there threatening suffocation.

DLXXXII. The striking symptom in this disease is a spasm, not fixed in a part, but moving along the course just described. The disease attacks in fits, for the most part leaving long intervals between them, and often not recurring more than once or twice.

DLXXXIII. The fits are soon removed by small doses of opium, repeated at short intervals: The intervals should be secured from danger by full diet, and a moderate and naturally stimulant management.

Of Rheumatalgia, or the Chronic Rheumatism.

DLXXXIV. Rheumatalgia is an asthenia, not so much a sequel of rheumatism when this disease is left to proceed in its own spontaneous course, as of the profusion of blood and of the other fluids during the

treatment, or of too debilitating a plan of cure; by which the sthenic diathesis and the inflammation peculiar to it, are changed into the asthenic diathesis and inflammation. Paleness of the skin takes the place of ruddiness: The appetite is diminished, the involuntary motions are impaired, debility and torpor prevail over all. So far the disease is understood to be chronic. As in rheumatism, the joints are pained and inflamed. But though this is the most frequent cause of rheumatism, so it sometimes arises—not from a sthenic origin, and an excess in the means of reducing that—but from pure debility.

DLXXXV. The cause of the disease is the usual one of any asthenia, predominant in the moving fibres of the muscles, situated below the skin over the whole surface of the body.

DLXXXVI. Its worst morbid powers are, penury of blood, cold, especially with the addition of moisture, impure air; and, besides these, as many of the other debilitating powers as happen to be applied, contribute, in proportion to the degree in which they

they are applied, to the morbid effect. Of these, excessive indolence and the reverse are particularly hurtful.

DLXXXVII. As all stimulants contribute to the restoration of the healthy state; so the most powerful of them in this case are nourishing food, friction, gestation, wine, taken in moderation, exercise, rather frequent than violent, and being as much as possible in the open air. Though it is an acknowledged fact, that rheumatism is one of the reproaches of physicians; it is more so than has been hitherto yet understood; it being an asthenic disease; while they at all times made use of the same kind of treatment, as if it had been the most sthenic, or, even upon the whole, a more debilitating treatment(c).

(c) If they should pretend to say that their bleeding and other evacuations were more moderate than in rheumatism; the answer is, that they were not so profuse at any given time: But, considering the length of time, that rheumatism draws out into, the frequent, and almost constant evacuations, conjoined with every species of inanition, made the debilitating practice upon the whole far exceed that used in the sthenic case. No wonder, then, that much mischief was done.

Of the Asthenic Cough.

DLXXXVIII. The asthenic cough is an asthenia, which, with the constant common symptoms, depends upon a frequent expectoration, which the cough excites; affecting every age, which has been under the influence of either direct, or indirect debility, and therefore old age, which is unavoidably the prey of indirect debility.

DLXXXIX. As consisting in indirect debility, it is the effect of an excessive operation of all the stimuli that have been applied either for a short time, or for a great part of life; the effects amounting to the same; that of the former from its degree, and that of the latter from its long continuance(*d*). In so far as its cause is direct debility, a deficiency of all the stimuli, leaving the excitability to be accumulated, induces this form of asthenia, from the spontaneous tendency of nature, life being only a forced state(*e*).

DXC.

(*d*) See above XXIX. XXX. and CCCC.

(*e*) So great is nature's tendency to that particular increase of excretion, which forms the matter of expectoration

DXC. The cough, which depends upon indirect debility, is cured by reducing the stimulus which occasioned it, gradually and cautiously to the proper and natural degree. And when it originates from indirect debility, the increase of the stimulus, the want of which occasioned the disease, till the degree of excitement, which constitutes health, is restored, effects the cure.

DXCI. Such is the nature of direct and indirect debility; that if the remedies of the former be pushed beyond the proper boundary, the cough appears again; and the same is the event of the same excess in the use of the remedies of the latter (*f*).

DXCII. Frequent and violent cough with copious expectoration has been always held for a sure mark of a vitiation or faulty state of the lungs. That faulty state was esteemed

toration in this disease, that every case of death from disease is an instance of it. Hence the dead rattle in the throat is universally the expiring symptom. See LXXII. and CCCXXVI.

(*f*) See par. XXXIII. XXXIV. and XLIII. XXX. CXXXIV. with the addition, and especially CCXXXIII. to CCXXXVI.

to be of a sthenic nature, and to give assurance of the presence sometimes of phthisipneumony, or consumption from an ulcer in the lungs, sometimes of bastard peripneumony, sometimes of a burning inflammation in the alimentary canal. In the former case an ulcer, or, in their way of speaking and what amounts to the same thing, tubercles were believed the cause of the disease; in the second case, inflammation, either in the intercostal muscles, or a different one from that, which occurs in true peripneumony, was, in their opinion, its primary cause; and, in the last case, not one of them would have hesitated a moment to have ascribed the state of the bowels to the only inflammation they were acquainted with, that which requires bleeding and evacuation for its cure. And no other inquiry was made, but whether the matter that was spit up, was mucus or pus. To ascertain this, premiums were proposed.

DXCIII. But, in fact, besides that no phthisipneumony, no bastard peripneumony, as they call it, nor any inflammation in the alimentary canal, was ever cured by antisthenic or debilitating remedies; and, in the
several

several trials that have yet been made, the first of these cases has been evidently relieved, nay, frequently completely removed, and the two latter thoroughly cured in numberless instances, and in all in which the sthenic or stimulant plan of cure has been used; I say, besides these large and comprehensive facts, so little information can be derived either from the quantity or appearance of the expectoration, that in certain fevers, in some other diseases of debility, quite free from local affection, and finally in this very cough of which we are speaking, there is often a more violent cough, and a greater expectoration of matter putting on every form and every appearance, than usually happens in a confirmed consumption, and where every hour is expected to be the last. And yet this whole tumult, heretofore so alarming, can be stopped in a few hours, and quite cured in as many days.

DXCIV. And, who does not know, that there are many persons, who have an immoderate cough, and proportional expectoration, for a long life, while their lungs, however, are sound, and free from any organic taint?

How

How often in phthisipneumony itself, after finishing its course, and terminating in death, has the whole fabric of the lungs been found upon dissection as found as ever happens in death from any cause (g) ?

DXCV. The cause of coughing has hitherto been unknown. To pass over the

(g) There are several cases upon record, of the lungs, after death from a confirmed consumption, having been found perfectly sound. A most respectable pupil of mine went to Lisbon with a young gentleman of considerable rank in Scotland, under a confirmed consumption, whom he brought back perfectly freed from his disease. He also saved either two or three ladies, I am not just now sure which, equally given up upon the common practice. He happened to assert before the physician of the factory, that a person just dead of the same disease had no local affection in the lungs, and upon dissection it was found to be as he had said. I have restored many phthisipneumoniacs, but am obliged to own, that I have lost three, to whom I was called too late. Their loss, however, mortified me, because there were many reasons for my setting my heart upon their cure. I also lost in Edinburgh the most amiable young man of that kingdom, after curing a prodigious hemorrhagy from his lungs. This was he whom my pupil two years before brought home safe from Lisbon. But I was prematurely dismissed in this, and counteracted in the other cases.

sthenic;

sthenic cough, with which we have nothing to do in this part of our subject (*b*); the cause of the asthenic is the same as that of any asthenia, but more vehement in the fountain of expectoration, viz. the exhalant and mucous arteries, the secreted fluids of which, inspissated by stagnation in the bronchia, constitute the matter to be expectorated.

α. α. The most powerful of the noxious agents in exciting asthenic cough, is cold, just as heat has been demonstrated to be the most noxious agent in catarrh (*i*). Nay, in the asthenic cough, such is the power of cold, that the slightest breath of air reaching the body, excites exceedingly violent coughing, and brings on the whole series of subsequent symptoms; the warmth of the bed as soon allays the cough, prevents the threatening, and cures the urgent, disturbances.

DXCVI. In this as well as the sthenic cough, it is the serous and mucous fluids that chiefly flow to the bronchia. The bronchia bear their pressure for a little, till, distended

(*b*) See CLX. CCXXXIII.

(*i*) See par. CCCCVII. to CCCCXII.

by the load, they can bear it no longer. The disagreeable sensation excites a commotion in the excitability of the affected part, and, therefore, over its whole seat, and rouses the excitement. A cough follows, and throws off the collected humours by which it is provoked.

DXCVII. This disease is always to be treated, first with stimulant remedies, and then with such as also fill the vessels. If indirect debility has been the morbid power, still we must stimulate,—at first to a degree little less than that which occasioned the disease, and then still less; and, after changing, from time to time, the form of the stimulus, less still; till we come down to the stimuli that are agreeable to nature or those that suit the most perfect health (*k*). In this way are ebriety and every form of intemperance to be treated. If direct debility has been the cause, the cure will be a good deal more easy: Here we must go on to stimulate more and more, till we ascend to that point of excitement, to which we came down in the

(*k*) See par. CIII.

case of indirect debility. In this way is the first stage of phthisis pneumonia, as well as its middle course, and also bastard peripneumony, nay, most cases of the debility affecting young people, and the disease to which the name

Of Chincough

DXCVIII. Is given, to be encountered in practice. Chincough is attended by a contagious matter; which varies in its degree, but so, however, that a sthenic plan of cure, adapted to the degree of the disease, for certain cures it. The change of climate or situation is a tale; the practice of vomiting, death (1). Indeed, since the disease is an
asthenia,

(1) Still to the old tune "cantilenam eandem canunt." They confessed they knew nothing about this disease, yet they prescribe change of air and place: If they knew nothing about the disease, how could they know what would be of service?—Others told them so. But why do they prescribe vomiting?—They heard that from their master's desk at school, and found, that the same authority was the reason of others for doing the same thing. Why vomiting? For the same reason, and because a

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asthenia, vomiting, which is so very debilitating an agent, cannot fail to be of the highest detriment (*m*).

Of Cystirrhœa, or the mucous Discharge from the Bladder of Urine.

DXCIX. Cystirrhœa is that mode of asthenia, in which, to the general symptoms of asthenia, and the particular ones of asthenic cough, there is an addition of mucus, rendering the urine turbid, without any previous pain or symptom of internal local affection.

relique of the doctrine of morbid matter has run through all their systems. Hence, in bleeding diseases, the universal rule has been to bleed, in vomiting to give emetics, in diarrhœa to give cathartics, in imitation, forsooth, of nature. The symptoms of disease have been mistaken for efforts of the constitution to remove the disease. It is now, however, proved, that there are no such efforts. Every symptom, and particularly every morbid evacuation, is to be stopped. The contrary practice is as good sense, as it would be to propose bringing on a dead rattle to cure the morbid one.

(*m*) See par. CXXXVII. and the addition in MS. and CCXCIV.

DC. In

DC. In so far as this is a general affection, the laxity, which is proportioned to the atony, must be removed equally in it, as in other cases of increased excretion; and particularly the stimuli of health must be accurately administered.

Of the Gout of stronger Persons.

DCI. The gout of stronger persons is a form of asthenia; in which, after a long habit of luxury and indolence, and especially when to those noxious powers directly debilitating ones have been recently superadded, indigestion, or diarrhœa, or rather both conjoined, with manifest signs of a diminished perspiration, precede; then the lower extremities are affected with languor. One or other of the smaller joints of the foot is almost always seized with an inflammation, which, if not resisted by a practice quite new, will prove most severe and painful, but of short duration, in comparison with subsequent attacks.

DCII. This disease may be called *the indigestion or dyspepsia of the luxurious*, that is,

the indigestion depending upon indirect debility; while dyspepsia may be denominated the gout of persons under direct debility, as having every symptom of the gout, except the inflammation (*n*). For, so little is there in names, that not only the diseases, of which we have been just treating, but likewise asthma, hysteria, the colic, and most of the diseases, which have taken their appellations from any remarkable disturbance of the alimentary canal, are equally prevented and cured by the same method of treatment pre-

(*n*) There are very few persons, who at one time or another in their life have not experienced painful twitches in some part or other of one of their feet, especially when they happened to be in a state more languid and sluggish than ordinary. Every which case may be considered as a gout in miniature. But when the whole phenomena, except the inflammation, happen to any person, call it dyspepsia, or what you will; it is to all intents and purposes a gout. Indeed, from all that has been said through this work, general morbid state appears to be a very simple affair, being nothing but an increase or diminution of the cause of the functions or powers of life, without any other difference, but that of the mere appearance of the symptoms to our senses, an appearance by which, when we look no further for information, we are also constantly deceived.

cisely,

cifely. Which is indeed the reason why the gout has been ranked in the number of the diseases of the alimentary canal.

DCIII. A taint, transmitted from parents to their offspring and celebrated under the appellation of hereditary, is a mere tale, or there is nothing in the fundamental part of this doctrine. The sons of the rich, who succeed to their father's estate, succeed also to his gout: Those who are excluded from the estate, escape the disease also, unless they bring it on by their own conduct. Nay, if there be but two diseases in the strict sense of the word, they must be either all, or none of them, hereditary. This supposition makes the noxious powers superfluous, which have been proved to be every thing respecting disease; and, as it is, therefore, absurd, so the truth of the latter opinion must be admitted. The stamina, or simple solids, are so given in our first conformation, that some persons are distinguished by a rigid, others by a slender state of the whole mass. This variety of the stamina, if the exciting powers, upon which the whole phenomena of life depend, be properly managed, admits each its respec-

tive state of health, suited to its respective nature, and sufficiently good, if the excitement, suited to each, be kept up by a proper direction of the stimuli. Though Peter's father may have been affected with the gout, it does not follow that Peter must be affected; because, by a proper way of life, that is, by adapting his excitement to his stamina, he may have learned to evade his father's disease.

β. β. If the same person, who from his own fault and improper management, has fallen into the disease; afterwards, by a contrary management, and by taking good care of himself, prevents and removes the disease, as it has been lately discovered: What then is become of hereditary taint?

Lastly, if the gout is the same disease as dyspepsy, arises from the same noxious powers, and is removed by the same remedies; if the only symptom, in which it can possibly be thought to differ, the inflammation, is only a slight part of the disease, depending upon the same original cause, and ready to yield to the same remedies; what signify distinctions about either, that do not apply

to both (o)? Nothing further is set forth by them, than, that a certain texture of stamina is favourable to certain forms of diseases (which forms are of no consequence), so that, when the excitement is adapted to the stamina, even those forms can be prevented or cured.

DCIV. The noxious powers producing the gout are, first, indirectly debilitating; they are not effectual all of a sudden, and commonly not before the meridian of life, that is, before the thirty-fifth year of one's age. Rich food, too much ease, have a very great effect, drink has less. Whatever has a tendency to wear out life and to consume the excitability, contributes to the effect. But the first fit seldom comes on till directly de-

(o) If I have kept off my gout for seven years past, after having been subjected to the most severe rage of the disease, might not I, much more easily, have prevented it before? But, it may be said, perhaps, that excruciating pain makes a great difference in the scale of comparison of any two diseases: The answer to that is, that, since the pain is as easily removed as the other symptoms, the difference is removed, and the weights in the scale equalized.

bilitating noxious powers have been super-added to the indirect (*p*). The following are particularly hurtful, abstinence, vegetable food, the hurtful effect of which is in proportion to the imbecility of the matter that composes it. The farinaceous substances are by no means safe (*q*), but less hurtful than roots, and these less so than greens (*r*); but

(*p*) My gout came on at the thirty-sixth year, after five or six months low living: It returned not again till betwixt five or six years after, because all the intermediate time I had been well supported: And this second fit was ushered in with low living, immediately previous to it, for near the same length of time, as before the coming on of the first fit. Nay, no gout ever came on but in consequence of direct debility; the indirect has not so quick an effect in that respect; at the same time it has a tendency to be hurtful, and therefore should be avoided.

(*q*) A mess of porridge, a dish used in Scotland, with small beer poured into it, and taken over-night, would bring on a fit of the gout next day.

(*r*) The juice of turnips, of cabbage, and even pease-pudding and pease-soup, which are commonly reckoned substantial dishes, have the same effect: When those substances, after being boiled, are used with a good solid meal of meat, I have always found them innocent. Green pease, eaten with lamb or fowl, are both harmless and grateful.

fruits

fruits are the most hurtful of all (*s*). Cold water, given in the height of the diathesis, to quench thirst, immediately produces nausea, vomiting, and other distressing symptoms of the stomach and of the rest of that canal, and hurries on a formal fit (*t*). The mixture of an acid with pure cold water increases the hurtful effect. Of the strong drinks; those prepared from barley by fermentation, that is, the different ales and beers, all the white wines in common use, except Madeira and Canary; and among the red wines, claret, indeed all the French wines, and punch with acid, are remarkably hurtful. And as indolence helps on with the first fit, so fatigue, especially that of walking, hurries on all future ones. Want of a sufficient quantity of blood is so hurtful at all times, that, though the theory of physicians led them to the notion that the disease depended on plethora and vigour, yet nobody ever

(*s*) Apples and pears are such: But the cold fruits, as melons, cucumbers, are almost instantaneous in their hurtful effect.

(*t*) See CLXXXIV. to CXC. to CCXXXVII.

thought

thought of taking blood (*u*). Vomiting is hurtful, and indeed one of the natural symptoms of a very bad state of the disease; but purging is worse (*x*). Every evacuation has a similar bad effect, with this distinction, that the artificial are much more hurtful than the spontaneous.

DCV. One is to be excepted,—excess in venery,—to which, though it be a spontaneous and natural, not an artificial, evacuation, gouty persons are so addicted, and so exceed others in power, that in the very middle of a very bad fit, they are not sparing of it (*y*). The exertion at first is not felt; but in the advance of life, and after many returns of the disease, it is felt at last with a vengeance (*z*). Great heat, by its indirectly debilitating

(*u*) This is one of their many contradictions between theory and theory, and theory and practice.

(*x*) At any time I can bring on a fit by a single dose of Glauber's salt, unless I happen to be very strong, and quite free of all diathesis.

(*y*) It is not quite correct to say that the mere evacuation is the mischievous circumstance here. It is the high degree of pleasurable sensation that principally enervates. EDITOR.

(*z*) At an advanced period of age, in persons who had been

debilitating operation, does some hurt (*a*); but great cold, by its directly debilitating, much more (*b*). Impurity of air is injurious (*c*), as well as an interruption in the train of thinking (*d*), but hard thinking is more so. A deficiency in the stimulus of passion is a pretty considerable noxious power (*e*); but violence of passion will convert this moderate degree of the gout into that highest degree of it, that attacks the head, lays a snare for life, and brings on certain death (*f*).

DCVI. Indulgence in sleep is bad (*g*), as producing direct debility, by deferring the re-application of the stimuli, which takes place in the waking state; but too little sleep

been vigorous, an unnatural power of execution sometimes, even in actual morbid state, will take place, so as that the person will be able to outdo all his former doings in that way. But it is a false power, it is a symptom of disease: It is like unnatural appetite for food amidst a weakness of the powers of digestion,

(*a*) CXV.

(*b*) CXVII.

(*c*) CXLVI.

(*d*) CXXXIX.

(*e*) CXLI.

(*f*) Ibid.

(*g*) CCXLV.

is much more hurtful, as it leaves behind it a degree of fatigue from the effect of the stimuli of the former day (*b*). Often, when the upper parts of the body have been recruited by sleep enough, the podagric, after getting up, feels a state of languor in his lower extremities, and a demand for more sleep on their account, and is obliged to go to bed again, and give the unrecruited limbs their respective share of sleep. When a person is heavy from short sleep, how great is the luxury to cherish again by the heat of the bed-clothes all the parts that have been exposed to cold, that is, the whole surface of the body and thighs, but especially the legs and feet; which last, during the presence of the fit, is the seat of the inflammation; and how delightful, in that way, to make up the necessary complement of sleep?

DCVII. To prolong the intervals of health, and prevent a fit, the remedies are all the reverse of the noxious powers: They are, rich food taken in plenty (*i*), but remaining with-

(*b*) See Part II. Chap. VII. CCXXXVII.

(*i*) See par. CCLXVI.

in its stimulant range, consequently of the animal kind, with a rejection of all sorts of vegetable matter, or a very sparing use of it; strong drink, not taken cold, unless when there is no danger of the disease (*k*), (at which time cold water after a good meal is safe,) not mixed with acid, not acedent, not turbid from fermentation when it is taken (*l*);

(*k*) I know well when I may take cold drink and use some vegetable matter; it is when, for some time past, I have been well supported, and feel strong and vigorous. I also know, if I have, either in food or drink, taken any thing improper in kind, how to correct it; which is, by having recourse to a proper stimulus. By eating an exotic fruit, which had a mixture of the qualities of the water melon, the orange and lime, in a quarter of an hour I had an attack in my stomach, in the middle of my lecture, last summer, at the Devil tavern. By some of the diffusible stimulus I repelled it, and went well on with my lecture. At other times I have prevented such an effect, by anticipating the remedy. This doctrine puts much more in our power: But we should not, therefore, play tricks with it. On the contrary, we have great reason to be thankful for the command it gives us over our health, and that also, by the use of means not inelegant, nauseous, and clumsy, but quite the contrary. The old motto of Asclepiades, *tuto, celeriter, et jucunde*, is verified and improved by the important addition of *salubriter*.

(*l*) CCLXVIII.

gesta-

gestation (*m*), exercise not so strong as to occasion sweat, or give fatigue (*n*), a full quantity of blood, which is procured by food and the exercise just directed (*o*), no evacuation (*p*), sparing venery, if gouty persons can observe the rule (*q*), a moderate temperature (*r*), equally between the extremes of direct and indirect debility; pure air (*s*), consequently cleanliness, and being much in the open fields; a chearful train of thinking (*t*); such a state of excitement, as to passion, as keeps between fiery excess and stupid apathy, with as great tranquillity of mind as possible (*u*); moderate sleep, rather inclining to be long than short, a rule which should be so much the more carefully observed, as the disease is of longer standing and greater severity: In fine, sleep should be

(*m*) CCLXIX.

(*n*) Ibid.

(*o*) CCXC. CCXCV.

(*p*) CCXC.

(*q*) DCXIX.

(*r*) CXII.

(*s*) CCCIII.

(*t*) DXIII. DXVIII.

(*u*) CXL. CCCIII.

allowed

allowed to continue till the most vigorous waking state is procured (*x*).

DCVIII. From what has been said it must appear certain, that the gout of stronger persons is not also itself a disease of strength, or a sthenic one; and that it does not depend upon vigour of the constitution and plethora, as has been commonly hitherto imagined; but that it is manifestly asthenic, like all the rest of the cases belonging to asthenia, and proved to be so by the strongest evidence; and that it is not to be treated by an anti-sthenic, as it has hitherto been the notion, but by a sthenic plan of cure; and that there is every encouragement for treating it in that point of view.

DCIX. What has hitherto deceived physicians, and passed for the cause of the gout, is the appearance of vigour and an over-proportion of blood, in most podagrics, from the bulk of simple solids in consequence of their way of life, and often from their great strength. But, good men! they never recollected, that vigour and a great quantity

(*x*) DC.

of

of blood are not properties inherent in animals, but that they depend every day and every hour upon foreign circumstances (*y*). If any one, according to that idea, who has happened to acquire a great bulk of simple solids, and who has enjoyed abundance of proper diet, to the thirty-fifth or fortieth year of his age, should all at once be deprived of all the articles of diet for ten days; and if a dwarf two foot high, who has lived poorly, and is, therefore, meager and slender, should equally suddenly be put upon rich living; will there be the least probability, that the former shall, notwithstanding his present absolute privation, continue plethoric and vigorous; and that the latter, from being crammed with unusual plenty, shall continue empty, as before? Is the fundamental proposition of this doctrine, in which it has been demonstrated, that we are nothing of ourselves, and that we are altogether regulated by external powers, to be forgotten? Is a gouty person, who has for twenty years undergone an excess of stimulant operation,

(*y*) X. XI. XII. XIII.

about

about the fortieth year of his age, or even afterwards to be reckoned fuller of blood and more vigorous, than another person who has lived lower, or than he himself was twenty years before? Where, pray, was the necessity of comparing gouty persons with others free from all bias to that disease, and why not compare them with themselves (z)?

Of

(z) Such is the effect of the powers operating upon us, that a certain degree of that operation produces an effect that would not arise under another. If the accustomed operation has been moderate, habit will render the excitement arising from it, in some measure, sufficient for the demands of the system: Hence, day-labourers are supported upon less stimulus than gentlemen. Again, which is a circumstance liable to happen to the latter, if the accustomed operation has been excessive, there will be a necessity for a continuation of some degree of the excess. A podagric may be stronger than a labourer, and yet fall into the gout. For though, compared with the other person, he is strong; compared with himself at another time, he is weak: And the reason is, that, though he is still better supported than the labourer, he is worse supported than the usual state of his system requires. Further, the labourer, though he falls not into the gout, may, by carrying his moderation too far, fall into indigestion, or some other disease, in every essential respect the same as the gout. A double inference arises here; which is, that, though both excess

Of the gentle Asthma.

DCX. Asthma is an asthenia ; in which, to the symptoms common to all astheniæ, there is superadded a difficult respiration, returning at uncertain and often unequal in-

and deficiency can be borne to a certain degree, so as to require a continuance of them, or a gradual correction, yet they should both be avoided as entailing that sort of necessity for their continuance while their effect makes no sort of compensation, being, at best, not the best state, that of perfect health, but a state of predisposition to disease ; the one to sthenic, and at last indirect debility ; the other to asthenic, as depending on direct debility. The perfect rule for insuring the healthy state, is to keep within the extremes of excess and defect, and thereby produce the due degree of excitement ; and to apply all the exciting powers equally, each in its due proportion. The due degree may be secured by one or a few, but the equality of it over the system can only be secured by their equal application. This proposition goes to the bottom of two extensive doctrines, that of life, and that of morals ; the last of which has as yet not attained to any thing like a fundamental principle. I intend to prosecute the idea upon some future occasion. I know a book filled with valuable ethic facts, but have not yet had time to consider, whether they all point to a general one, in which they all agree, and which reflects proof and confirmation upon them ; without which it would fall short of scientific exactness.

tervals,

tervals, without any unusual expectoration accompanying the fits.

DCXI. The noxious and curative powers here are the same as in the gout: In the same manner the fits are both prevented and removed (*a*).

Of Cramp.

DCXII. Cramp is also one of the cases of asthenia; in which, often from pain, often from drunkenness, and not seldom from sweat, and disagreeable soaking heat, sometimes the wrists, sometimes one of the calves of the leg, in fine, any external part, are affected: Of the internal parts, it is sometimes the stomach, sometimes some part in the intestinal canal, sometimes the urinary bladder, that suffers: The disease is not produced only by indirectly debilitating powers; it also arises from directly debilitating ones, such as abstinence, vomiting, diarrhœa, and drinking water contrary to custom.

(*a*) This has been proved, both upon other occasions, and particularly in the case of a young gentleman, who lived with me during my first management of my gout. See Preface to the Elementa.

DCXIII. To remove this disease, when it does not exceed the degree that is here understood, the whole body must be invigorated by moderate stimuli, every violent exciting power should be taken out of the way; gestation, and such exercise as does not exceed the strength, should be used. A more severe degree of this disease will by and by be treated under the title of tetanus.

Of Anasarca.

DCXIV. Anasarca is a form of asthenia, distinguished by water betwixt the skin and the flesh, occasioning an external swelling of the body, without the signs of any suffusion of the same fluid into the interior parts.

DCXV. In the treatment, the body must be invigorated, and in that part of it chiefly, where the greatest laxity and atony prevail, that is, the skin. This indication is answered by stimulating heat, by friction, by pure and dry air, by nourishing stimulant diet, and the peruvian bark. No internal local affection gives occasion to it, which may be known from the symptoms yielding to this plan of cure.

Of

Of Colic with Pain.

DCXVI. Colic with pain is a form of asthma, and a higher degree of the colic without pain; in which, to the signs of debility in common to all the asthenic cases, are superadded a greater violence of the same symptoms, twisting pain about the navel, with pain in some part of the belly, often enormous, and sometimes with a tumour, that can be felt externally, immediately above the brim of the pelvis, on the right side, at the place of the blind head of the colon.

Of the Dyspepsodynia, or Indigestion with Pain.

DCXVII. Indigestion with pain is an asthma, which adds to the symptoms of indigestion without pain, a pain and gnawing feeling in the region of the stomach, and is a very severe disease.

Of the violent Hysteria.

DCXVIII. The violent hysteria is a higher degree of the mild hysteria ; in which, besides the symptoms described under that head, mobility and changeableness of mind, disposition to sleep, convulsive state, and a great resemblance to epilepsy, are conspicuous. The temperament, that favours hypochondriasis, is of an opposite nature to this, which is commonly called the sanguine. Both the temperament and predisposition in this case are produced by a moist, lax, set of simple solids.

Of the Gout of weakened Persons.

DCXIX. The gout of weakened persons, which is an increased degree of the gout of strong persons, is that asthenia, in which the inflammation runs to greater length, and, at last, does not form at all ; while the general affection increases in violence and obstinacy, and, at last, attains its highest degree ;

gree; exhibiting, towards the end of the disease, almost all the symptoms of debility, every form of asthenia, and sometimes counterfeiting synocha.

DCXX. As the diseases affecting the alimentary canal, formerly mentioned (*b*), have, in great measure, a common nature; so these also, that is, the colicodynia (*c*), the dyspeptodynia (*d*), the violent hysteria (*e*), and the gout (*f*), equally participate of the same, differing only from the former in their higher degree of violence. Their most distinguishing symptoms are either spasm, which takes place in colic and indigestion with pain, or a spasmodic convulsive affection, which accompanies the others. But they do not differ from each other in any thing essential; since they all, without distinction, depend not only on debility, but also nearly upon an equal degree, as the similarity of their

(*b*) From DLVI. to DLXXVI.

(*c*) DCXVI.

(*d*) DCXVII.

(*e*) DCXVIII.

(*f*) DCXIX.

morbific powers and remedies proves. For a very full explanation of spasm and convulsion go back to the following numbers, CLXXXVIII. to CXCV. and from the latter to CCI.

DCXXI. In the treatment of them all (*g*), abstinence, fatigue, evacuations, acids and acescents, cold, directly and indirectly debilitating passions, the debility arising from exertion of the intellectual function, and impurity of air, must be avoided. The mode of cure of every one of them must be stimulant. When each is but slight, beef soup and other rich soups, which act partly by dilution, partly by a nourishing and stimulant operation in the weak state of the stomach when solid food cannot be taken, and by supporting the system; afterwards, when the strength is in some measure restored, solid animal food, and moderately diluted drink, which, at last, establish the health, are sufficient. In a higher degree of disease, while the soups should still be continued, at the same time pure strong

(*g*) Peruse the whole of Chap. IX, Part II, from numb. CCLXXXI.

liquors

liquors should be administered. And when the violence of any case baffles this whole set of stimuli, recourse must be had to musk, volatile alkali, camphor, æther, and opium. These must be administered in large doses; and all acid and fermenting things, every thing cold, though accompanied with stimulus, must be guarded against.

DCXXII. As to the management of the patient in the intervals, all debilitating powers must be avoided, such as fatigue, abstinence, cold, and excessive heat (*b*); it is a certain and demonstrated fact, that the fits of recurrent diseases do not return from any inherent power of nature, but from human folly. You may accept of this as a joyous and unexpected piece of news. The recurrence of fits of the gout itself is not unavoidable (*i*); but, by guarding against the noxious powers, may be repelled for any length of time; and, when it happens at any time to come on from the fault of the patient, it

(*b*) See again the same Chapter, which compare with the preceding, the VIIIth of the II^d Part.

(*i*) See par. DXCVII.

can often be removed in two hours, and almost always in as many days, and the state of health secured in every respect. In all diseases of similar vehemence, whenever any stimulus, from a long continuation of its use, has begun to have less effect, we should lay it aside, and proceed to the use of another, from that still pass to another, and in that way go over the whole circle (*k*).

Of Hypochondriasis.

DCXXIII. The hypochondriasis is an asthenia, in which, with the symptoms of dyspepsy, there is a noise in the belly, flatulency, and uneasiness, and a rooted opinion in the patient, of the disease being always worse than it is. The way to the disease is paved by a dry set of simple solids, and that temperament, in which there is a natural slowness to passion; which, however, once excited, rises to extreme violence, and continues long with obstinacy. It is further distinguished

(*k*) XLI.

by

by a fixed attention of mind, whereby the patient is liable to dwell to excess upon any pursuit or study, and is not to be easily diverted to another, as also by a dry state of the surface of the body, a rough skin, with black hair, and black eyes, and always a dark complexion and serious aspect.

DCXXIV. From this definition, hypochondriasis is beyond doubt an asthenia, as it is accompanied with a noise in the belly and flatulency, and as the course of the disease is distinguished by slowness to passion, earnestness in thinking, and by that state of the simple solids, which requires a high force of stimulant operation to procure and keep up a sufficient degree of excitement.

DCXXV. Since the state of the simple solids is a state given by nature, and not to be changed by art, and the only indication of cure left in the physician's power, is to fit a certain degree of excitement to that given state, which is exactly the case in this disease; the stimulus of food, drink, and others, should be employed in the cure of hypochondriasis. The patient should be kept cheerful, by agreeable company and
 gay

gay entertainments, by a journey, and by the various scenes of nature and art through which he passes. During his journey he should ride, that, in guiding the horse, his mind may be more occupied. His studies and every subject of his ordinary contemplation should be often changed and varied. He should have generous wine given him, to relieve the symptoms of his stomach and intestines, and to raise his animal spirits. And if these should fail of success, the diffusible stimuli, as opiates, should have their turn for a time, for the purpose of striking a stroke at once. And their use again should be gradually laid aside in proportion as the strength can be supported by the more natural and accustomary stimulants. Darkness and bad air should be shunned; bright light, and all lively objects, should be sought after. No hypochondriac, even in a fit of delirium, should be provoked, but by every contrivance soothed (1).

Of

(1) I have heard of an hypochondriac so provoked at his physicians, who maintained that nothing ailed him, that he, on the contrary, to carry his opinion of his disease

Of Dropsy.

DCXXVI. Dropsy is an asthma, commonly in the form of an anasarca, with a swelling of some viscus, which, for the most part, at least in the beginning, attacks some part in preference to others.

DCXXVII. The cause of dropsy, in so far as it respects the collection of water, is easily explicable upon this doctrine, but altogether inexplicable upon any other. For the universal debility, that is, laxity and atony, is

case to the utmost, at last took it into his head, that it had attained its utmost height, by depriving him of his life. He continued obstinately in the notion of his being dead, till a more sensible practitioner was called in to see him. This gentleman agreed that he was dead; but, as he could not discern the particular cause of his death, he, therefore, proposed to open the body: In setting about which, he made such a clashing with a great apparatus of instruments, provided for the purpose he intended, that the patient was roused from his obstinate fullness, and allowed, that this gentleman had come nearer to his case than any of the rest; but acknowledged, that he now found he had some remains of life.

chiefly

chiefly predominant in the extreme red arteries, and the exhalants immediately continued from these, as well as in the commencements of the absorbent veins; and it is often urgent in a particular set of these vessels only.

DCXXVIII. As all the debilitating noxious powers concur in producing this, as well as every other asthma; so those powers have the greatest influence in this case, that press most upon the vascular system. Hence, as we see in the conversion of peripneumony into the dropsy of the chest, profuse bleeding, and a large draught of cold water, when the body is fatigued, overheated, and burned up with thirst, are the most powerful agents in bringing on this disease. The hurtful effect of the latter, in every case of debility, when its operation is not followed by some stimulus, has been more than sufficiently explained above (*m*). Besides, in this case, when all the vessels are dilated, the water flows to their terminations, which are their weakest part, passes out at these, and, as it cannot all be taken up by

(*m*) See par. CXVII. to CXXIV.

the absorbents, it collects in every neighbouring cavity (*n*). Hence the urgent symptom in this disease.

DCXXIX. To this asthenia belong all the watery effusions, which do not arise from local affection, but depend on pure debility. And, therefore, if at any time any other form of asthenia, whether from wrong treatment, or other noxious powers, terminates in this effusion; every such case should be held as a proper dropfy (*o*); and it should be ever present to our recollection, that there are only two general diseases, and that the distinctions hitherto received are devoid of all solid foundation. Accordingly, both from other improprieties in the treatment, and particularly from bleeding, epilepsy, palsy, and gout, terminate in real dropfy. Nay, such is the termination of peripneumony itself, when it is either converted into direct debility, from the debilitating plan of cure having been pushed to excess, or into indirect debility, from having been left to itself, and the body

(*n*) LIX. LX. LXI.

(*o*) See LXXXI.

not sufficiently debilitated. The affections, confined to parts, which are considered as the remote causes of dropfy, will be treated among the local diseases, to which they belong.

DCXXX. After this explanation of the nature of dropfy, its cure, provided the treatment be proper, and early enough set about, ought by no means to be so much despaired of, as it should be when local affection with a similar effusion, and the general disease are blended together without distinction, and considered as one and the same(*p*). If long before the effusion there was no internal complaint, if the disease rather came on suddenly, and in consequence of evident noxious powers, and yields to the first part of the curative means, there is no reason to doubt of a cure.

DCXXXI. Besides the general indication of cure for asthenia, that suited to this case must be particularly directed to the whole

(*p*) Sometimes the predominant symptom rises to the degree of being above the power of the excitement, as in the tumour of scirrhus, and the effusion here.

vascular

vascular system, and especially to the termination of the arteries, and the commencement of the absorbent veins. The remedies are also the usual ones ; that is, diet as nourishing and stimulant as possible ; first in a fluid form, when the solid cannot be admitted upon account of the debility of the stomach ; then, also in a solid form ; and together with both, strong drink, such as the best wine that can be gotten, fermented spirit, sometimes pure, sometimes diluted. If the disease does not yield to these, after their use has been continued for a proper length of time ; recourse must be had to the diffusible forms : By this means, when the effusion has not yet attained to that high degree that constitutes a local affection, and is not to be altered by any state of the excitement, this asthenia can be as easily cured as any other.

DCXXXII. But, when a great quantity of water has now gotten into some large cavity, it should immediately be removed by the catheter ; when that has been done and the emptied cavity secured with as much care as possible, the strength should be supported

by wine, strong drink, and any stimulus more diffusible, as directed a little above. And if this should likewise fail, we must conclude, either that the general disease has degenerated into a local, or that the affection has been local from the beginning.

Of Epilepsy.

DCXXXIII. Epilepsy is an asthenia; its distinguishing symptoms are, some heaviness of intellect, dulness in the exercise of the senses; afterwards a very impaired state or temporary extinction of the latter, accompanied with various convulsions over the body: Fits, consisting of such a concurrence of symptoms usually, at length return at uncertain spaces of time, and each of them terminates in a foaming at the mouth.

DCXXXIV. As all the debilitating noxious agents are productive of this disease; so the loss of the blood and other fluids, excess in venery, such passions as fear, terrour, assiduous and intense thinking in persons of
great

great genius, a deficiency of intellectual exertion in stupid persons, are particularly so (*q*). The powers that produce the first fit, more easily bring on subsequent fits: Besides, certain unusual impressions upon the senses, some of them disagreeable, some highly agreeable; such as the flavour of some foods, the smell of a rose, have the same tendency; and certain poisons (*r*) are said to have the same effect.

DCXXXV. But the appearance of symptoms is full of fallacy, and, unless the nature of the noxious powers producing and of the remedies removing them, be thoroughly understood, it is incomprehensible. To solve the present difficulty about poisons, and to settle the question, whether the symptoms belong to universal, or local disease; we must consider, whether the latter, consisting in the vitiated state of a part, suppose either of the stomach or brain, or in some point of the lower extremities, proves the cause of the

(*q*) See above par. CXXXIV. CXXXVII. and the addition; CXLII. and CXXXIX.

(*r*) See XX.

aura epileptica ; and whether this vitiated state resists the virtues of the remedies, that act by changing the excitement ; or whether all the symptoms are either relieved or removed by the change of excitement. If the former is the cause, the affection must be considered as local (s) ; if the latter, the disease must be held for a general one, and a true, but a great asthenia. Nor must we forget, that a great many symptoms of general diseases, though from the same origin, are dissimilar ; and many from different, nay, opposite causes, are similar ; that many local symptoms have a great resemblance to those of general diseases, and that they sometimes, by a fallacious appearance, counterfeit epilepsy, sometimes apoplexy, sometimes certain other general diseases.

DCXXXVI. For the purpose of preventing this disease, we must avoid other debilitating powers, and especially those that have the greatest power in producing it. The vessels should be filled, by giving food as

(s) See above CCXXIV.

nourishing

nourishing and as effectual in producing blood as possible; indulgence in venery must be moderated, chearfulness and tranquillity of mind must be promoted, an agreeable train of thinking must be induced, and all objects disagreeable to the senses, which give them disturbance, guarded against; the strength must be fortified by proper exercise, by the peruvian bark, if the approach of the fits can be perceived, and by wine and the more diffusible stimuli. A medium betwixt too long and too short a continuance of sleep should be observed. Stimulant heat should be applied; but all excess of heat, as well as cold, avoided (*t*). The purest air, such as that in the fields, when it is free from moisture, should be sought after. The surface of the body should be excited by friction, and cleanliness, for the purpose of cherishing the organs of voluntary motion, which are very closely connected with the animal power in the brain.

(*t*) See CXXIV. CXXVII. CCXXVIII. CCLXXVII. CXXXVII. CXXX. CCXXXVIII. CCXXXIX. CCLX.

DCXXXVII. The same remedies, which radically cure the gout, also cure epilepsy, and precisely in the same manner (*u*).

Of Palsy.

DCXXXVIII. Palsy is an *asthenia*, in which, with the other usual marks of debi-

(*u*) This paragraph is the answer to the question proposed in that which stands in the *Elementa*, answering to the same number. That paragraph therefore is erased, and this put in its place. I had heard from some of my pupils, that they had been able, by their diffusible stimuli, to remove epileptic fits. But in case of any mistake I would not venture to mark the fact for certain, which I have now done from my own perfect conviction. A young man lately married had the most alarming fit of epilepsy that ever was: His case was thought beyond remedy; as an extreme one, however, he got from some person the full of a tea-cup of tinctura Thebaica up to a blue ring a little below the brim. He got out of his fit some how or other: But was perfectly stupid and senseless for a fortnight. Upon his falling into another, I was sent for, and brought him about in twenty minutes, as I am told, (for I did not wait,) so completely, that he got out of bed, and ate a hearty meal of beef steaks. Many weeks after, by mismanaging himself, and neglecting directions given him, he fell into a slighter one, and was cured in the same way.

lity,

lity, often with some degree of apoplectic attack, commonly on a sudden, the motion of some part of the body, and sometimes the sense of feeling, is impaired. When the fit is slight and of short continuance, it terminates in health; but the consequence of a higher degree and longer duration is death.

DCXXXIX. The noxious powers, that usually produce epilepsy and apoplexy, also tend to produce palsy: Besides these, all the common debilitating powers that produce any asthenia, directly or indirectly; great commotion of the nervous system by means of too diffusible stimuli; which affect the circumference of the body, where the organs of voluntary motion are chiefly seated, more than the internal parts and the brain; as is evident in ebriety, gluttony, and every sort of intemperance; likewise an indolent way of life, which is commonly connected with these noxious powers; have all the same tendency.

DCXL. When the disease has once taken place, it is kept up equally by directly and indirectly debilitating powers;

DCXLI. For the indication of cure, which is precisely the same as in epilepsy, as the energy of the cause operates more immediately upon the surface of the body; consequently, according to what was said upon the subject of epilepsy, the principal remedies are those, that have the greatest power in invigorating the surface of the body: Such are friction, gestation, that degree of exercise which the strength admits, for the purpose of rousing by their powerful operation the languid excitement in the fibres of the muscles; likewise a proper degree of heat, of pure air, and therefore, as much as possible, the open air; lastly, as none of the powers endued with stimulant virtue should be by any means omitted, in order that the excitement, which is of great consequence in the treatment of all diseases, be more equal and vigorous; so in that extreme debility which produces such an impotency of voluntary motion, as it is of the greatest consequence to make an impression upon the principal symptom; we should employ a great deal of opium (CXXX. and CCXXX.); the influence of opium upon the surface is more considerable

siderable than that of all the other powers. We should continue this plan of treatment with vigour till some commencement of returning motion be procured; and then, without neglecting the assistance of any of the other stimuli, but using them all in concurrence or succession, for the sake of rendering their common effect more powerful and more equal, we should try to eradicate the disease.

DCXLII. Debilitating and evacuant powers are to be avoided for this reason, that it is not vigour, it is not an over-proportion but a scantiness of blood, and a deficiency of vigour, that is the cause.

Of Apoplexy.

DCXLIII. Apoplexy is an asthenia, resembling the two just mentioned in its cause and cure, differing in the appearance of the symptoms, which makes no difference in the nature of the thing (*x*): In this disease, besides the symptoms in common to it

(*x*) LXXXI. DXXIX.

with

with palsy, epilepsy, and other astheniæ, sense, intellectual energy, and the voluntary motions, are suddenly impaired, the respiration remains, but with snoring, the pulse is weak, and the whole fit is finished with the appearance of a profound sleep (*y*).

DCXLIV. The heads of persons, subject to this disease, are large and not well formed, their necks short and thick. It is produced by both direct and indirect debility, but chiefly by the latter. Of the indirectly debilitating powers, the most powerful is the luxury of food, drink, and sloth, which, after its course of stimulating and filling the vessels is run, proves truly debilitating and productive of a penury of fluids: And, as each sort of debility is increased by the other, and consequently the indirect by the direct, it is remarkably the case in this disease. Hence the effect of the debilitating plan of cure is so pernicious in apoplexy, that it is received as a rule, that the third fit is not often, the fourth never, gotten the better of.

(*y*) CLIII. CC.

DCXLV.

DCXLV. The cause of epilepsy, palsy, and apoplexy, is the same with that of every asthenia; affecting the head less in palsy, excepting in the beginning and end, but greatly in the two others; and in all the three producing a disturbance in the organs of voluntary motion. This disturbance, whether the motion be destroyed or diminished, or as in convulsion seemingly increased, amounts to the same thing, and, as was formerly explained, depends upon debility (z).

DCXLVI. The indication of cure is the same here, too, as that which runs through this whole form of diseases; and the force of the remedies is especially, and as much as possible, to be directed to the parts most affected. To prevent, therefore, the fits, which are in every respect alarming and full of danger, we ought to bear in mind, how far indirect debility has a share in producing this disease, and how far the direct concurs with it; also we ought to consider the operation of a greatly advanced age. All excessive stimulus, therefore, must be avoided in

(z) LVIII. CCXXX.

fuch

such a manner, that the body may be invigorated and direct debility guarded against; the stimulant plan of cure should be set on foot with moderation and accuracy; and, in the place of the forms of stimuli, that have, either from long or excessive use, lost their stimulant operation, others, according to the rule of nature, which the excitability, yet not worn out with respect to them, admits, should be substituted; that is to say, the kinds of food, of drink, and of diffusible stimuli, should be changed all round, and upon the failure of each lately used, we should return to those that have been long ago laid aside (*a*).

DCXLVII. The three diseases we are treating of, are commonly supposed to arise from a plethora, attacking the head, and proving hurtful by compression upon the brain. But, besides that plethora has no existence in any case where it has been supposed (*b*), how can the blood be in over-proportion either at that extreme age at which these diseases happen;

(*a*) CCCI.

(*b*) CXXXI. CXXXIV. DXLIX. DLV.

or

or in epilepsy, when it affects weak and starved children? Can penury of food (which alone is the matter that forms blood) in the latter, and in the former the loss of vigour, create an over-proportion, and not, on the contrary, occasion a penury of blood?

DCXLVIII. As plethora then has no share in inducing these diseases, so neither are they to be imputed to an effusion of blood or of serum (*c*) upon the brain. Nay, a similar effusion happens in every case of great debility of the vessels.

Of the Lock-Jaw.

DCXLIX. The lock-jaw is a less degree of tetanus, the spasm being confined to the lower jaw and the neighbouring parts. This by itself is a rare affection; it is a formidable symptom in fevers and wounds. When it is the former, it will be treated of under fever; when the latter, it will give occasion to an inquiry, whether it belongs to local or general disease.

(*c*) CXXXVII. and the addition.

DCL.

DCL. Since it never arises immediately after a wound is inflicted, but usually happens, either when the wound is healed up, or after a considerable interval of time; we must infer, that it either arises from the violence and duration of the pain, which is always the cause of much debility, or from the debility which the usual antispasmodic plan of cure produces, or from an unknown taint in the substance of the nervous system.

DCLI. That it depends upon debility we have reason to believe, from every sort of spasm always depending on debility (*d*); from tetanus, which is precisely the same affection, only differing in degree (*e*), having no other origin; and, in fine, from the success of the stimulant plan of cure in this as well as all other spasms; and the want of success of the antispasmodic, or debilitating evacuant plan. All the other particulars respecting this subject will be taken notice of under the next head.

(*d*) CLXXXIX. CXI.

(*e*) CCXXVIII.

Of Tetanus.

DCLII. Tetanus is an *asthenia*, and, therefore, always affects persons in a state of debility, whether direct or indirect; in which, sometimes with consciousness, sometimes without, sometimes with difficulty, sometimes with freedom, of respiration, the whole body, or the neck and its neighbourhood only, are bent sometimes forward, sometimes backward, and held fast by a rigid spasm.

DCLIII. Tetanus is rarely seen in cold countries, as the northern parts of Europe; more frequently in the warm southern regions of that division of the globe; but most frequently in the torrid zone. When it appears among us, it is the sequel of a debility uncommon in general diseases: On the contrary, it almost always arises from that unusual debility, which is occasioned by a lacerating wound, through which fractured bones are forced, increasing the sum of that debility that existed before, or that happened to be induced in the course of the treatment. To produce the more frequent case, or that
most

most frequent one of all, which is quite common in the torrid zone, the most powerful of the debilitating powers, and a great many, if not all of them, concur. The most powerful of these is, that intolerable degree of heat, to which persons engaged in labour, or exercise are there exposed; such persons, and consequently slaves, are almost the only victims of tetanus. Hence, even under the slightest motion, fatigue, and sweat, are produced (*g*), and from the sweat arises a scantiness of blood and other fluids. From all these arises a languor over the whole body, and, therefore, in the stomach (*b*): From the languor of the stomach there is a puny appetite, and food—which is another cause of penury of the fluids—is either not taken in, or thrown up again. All these affections, as well as that indolence both in mind and body, which is inseparable from such circumstances, are followed by the highest degree of debility over the whole body: And, as the most noxious power, intense heat, distresses the head more than any other part,

(*g*) CXV. CXXXVII. and addition.

(*b*) CLXXXVI. CXCIV. to CXCVIII.

as well as the organs of voluntary motion, whether in the neighbourhood of the head, or more distant from it; that is the cause of the urgent symptom, the spasm, occupying the parts that have been mentioned.

DCLIV. As tetanus is occasioned by all the debilitating powers, according to the different degrees in which they possess that property, and, consequently, like every other *asthenia*, depends upon debility; and, as all the *astheniæ* are removed by remedies, exciting the whole system in such a manner, as to exert the greatest possible influence upon the affected part; the same, accordingly, is the nature of tetanus, however little that disease has been understood, and the same simplicity of nature is found in it. If it requires the very highest remedies, this shows, that the whole disease does not consist in spasm, and that the affected muscles are not its whole seat, but that there is extreme debility in every part, but greater in the muscles than in any other equal part, according to the law we have mentioned (*i*).

(*i*) XLIX.

DCLV. After tetanus has taken place, as the teeth are closed by the lock-jaw, there is neither access to the weaker and less powerful stimuli of food and drink, which are often sufficient for the cure of diseases of less debility, nor any sense in using them; we must, therefore, immediately have recourse to the most powerful and the most diffusible stimuli possible, and continue their use without regard to quantity, not even to that of opium itself, till the whole tumult of the disease is allayed (*k*).

Of intermittent Fevers.

DCLVI. Paroxysms, consisting of a cold, hot, and sweating fit, are phenomena that occur in every intermittent; and, in a certain degree, in every remittent fever. They often come on in consequence of a certain taint received from contiguous morasses, or from the marshy state of the contiguous soil; but they also frequently occur after an applica-

(*k*) CCXCV. to CCCII.

tion

tion of cold only (*l*); at other times after that of heat only (*m*), when the common asthenic noxious powers accompany either: They return with a remarkable exacerbation, after a temporary solution or an abatement of the disease; in the cold fit, exhibiting manifest debility; in the hot, counterfeiting vigour; and scarce ever observing any strict

(*l*) As in the vernal intermittents in Scotland. In the Mers, or county of Berwick, where I laboured three months under a tertian, that is, from the beginning of March to the beginning of June, and in the Carle of Gowrie, and some other places in that country, nothing is more common than the tertian ague happening at the time at which I was affected; and nothing is more certain, than that cold and moisture are the chief powers inducing it. It is somewhat strange, that a man born in that country, if he would patch up a system of fevers, should have overlooked a form of them, that occurred to his eye-sight every day, and borrowed his hypothetical cause from a marsh miasma, supposed to be the produce of great heat and moisture, though he had only heard or read of the intermittents of warm countries.

(*m*) In the warm countries agues often occur, when it is easy to discern heat to be an hurtful power; but when moisture is much less prevalent, for that very reason that the heat is prevalent, than at other seasons when the disease does not occur.

exactness in the time of their return (*n*) ; but returning sooner in a higher, and later in a lower, degree of the disease ; and not unfrequently, besides the remittent, also gradually assuming a continued form ; and, on the contrary, sometimes without interference, oftener in consequence of an improper method of cure, before the disease is ended, changed into quintans (*o*), septans (*p*), nonans (*q*), or into sextans, octans, and decans (*r*).

DCLVII. The intermittent fever, which returns every fourth day, and is therefore called a quartan, is milder than that which receives the name of tertian, from its recurrence being on the third day, and the latter is milder than that which, from its return

(*n*) Dr. Sydenham was content to count the periods by the day, which was even too particular, but Nosology has refined the matter into the wonder of exactness to an hour.

(*o*) Where the fit does not return till the fifth.

(*p*) Where its return is not till the seventh day.

(*q*) Where the intermission continues till the ninth day.

(*r*) That is, prolonging their intermission till the sixth, eighth, or tenth day.

every

every day, is denominated quotidian. The disease, that degenerates into a remittent or continued form, is of a worse nature than that which is regular in its returns, or that in which the intervals betwixt fits are protracted: and, the form and type of each case being given, the whole set is both of more frequent recurrence, and of a more severe kind in hot, than cold, climates.

DCLVIII. That this sort of fever depends upon debility throughout the cold fit, is proved by the symptoms, by the exciting noxious powers, and by the method of cure, whether successful, or the contrary.

DCLIX. The whole disease, as well as every paroxysm, begins with a sense of cold, the greatest desire for a warm situation (s), with trembling, and a shaking motion in which the whole body is lifted up from the

(s) I yet remember, that it was the highest luxury for me, when the cold fit came on, to be put in bed, and covered under such a load of blankets (for the cold of sheets was intolerable) as would, at any other time, have oppressed me. I was then about eleven years of age.

bed (*t*), with paleness, dryness, and shriveling of the skin, with the diminution of tumours, and drying up of ulcers, which the patient may happen to have had before the arrival of the disease, with an impaired state of the intellectual faculty, a want of steadiness in its exertions, and sometimes delirium, with a dulness of sensation, languor of spirits, torpor of the voluntary motions, a listlessness of mind and body in all the functions, in fine, with manifest debility.

DCLX. If terror, horror, cucumbers, cold melons, famine, debauch in eating and drinking, food of difficult digestion, have been found for certain, to have a great effect in bringing back paroxysms, after a long intermission; if in situations, where cold is the principal noxious power, it is the poor people who are ill clothed, starved in their diet, and enfeebled by labour, who in general are affected with this disease; if in warm regions of the globe, it is those who have been most exposed to debilitating noxious powers of all

(*t*) By authors and lecturers in Latin absurdly called rigor.

kinds,

kinds, who, in preference to others, are seized with it (*u*) ; if in moist places, those who use a plentiful diet, and cheer themselves with their bottle, escape the disease (*x*), and water drinkers and persons in a state of inanition from low living, are peculiarly subject to it ; all these facts show, how far this disease is from depending upon heat and moisture alone ; and that it also arises from cold, and not from these alone, but also from all the usual noxious powers, like every other asthma.

DCLXI. Further, if every kind of evacuation, as often as it has been tried, is found, without the possibility of a doubt, to be hurtful ; if no person in his senses has

(*u*) See DCLIII.

(*x*) As in Holland ; where the Dutch students who live not near so well as the English, are very liable to the disease, while the jolly living English, who do not like the weak rhenish wines, and the weak ill managed vin de Bourdeaux, which is a cheap dirty claret, almost never fall into the disease at Leyden, while the Dutch are perpetual victims to it as often as it is epidemic.

scarcely ever attempted bleeding (*y*); if, before the Peruvian and some other barks of similar operation were found to act as remedies, a variety of strong drinks (*z*) were used with sufficient success; and if it now also is found and demonstrated in fact, that the diffusible stimuli are by far more effectual than

(*y*) They have talked of taking a little blood in the spring intermittents, but that was a theory of Dr. Sydenham's, who divided the diseases of the whole year, into inflammatory and putrid; and I do not find, that that idea has ever been followed in practice. For though they follow him most servilely in most respects, especially where he is wrong, their vanity, that they may now and then seem to strike out something from themselves, disposes them to differ from him in others, especially where he is right, as in the rejection of purging in some sthenic diseases (CXXXVII).

(*z*) As ale, wort, wine, spirits, strong punch, Riverius followed this plan; and I remember it was a custom among the common people to cure themselves by getting tipsy. But I was allowed neither the one method of cure, nor the other. The authority of Dr. Sthaal and Boerhaave, had thrown the bark into disrepute in Britain: And my mother, "who trusted in God, and not in physicians," left me to the course of desires and
aversions,

than any bark ; nay, that the bark often fails, while they are perfectly effectual in the re-establishment of health ; from these considerations, we derive the most solid conviction, that there is nothing in this disease different from other astheniæ, but that it perfectly agrees with them in the exciting noxious powers, in the cause, and in the cure. And, if it differs in the appearance of the symptoms, this indicates no difference of nature, and not even any thing unusual ; for all the astheniæ that have been mentioned, clearly as they have been proved to be the same (*a*), differ notwithstanding, in a similar manner, from each other ; and symptoms neither lead to truth, nor do they give any real information. For, though precisely the same functions flow from the same state of perfect

aversions, which were chiefly to avoid cold, and anxiously seek for heat. She kept me upon a vegetable diet in the intermissions, which I even then did not much like. It was the kindly warmth of summer, which then set in early, that had the chief effect in gradually finishing that cure.

(*a*) See par. LXXI. and the addition. LXXXI. DCXXX.

health ;

health ; yet when the latter is changed, the excitement is either increased or diminished, the functions are changed from the healthy standard into every sort of appearance ; in such sort, however, that these changes argue no difference in the cause, as has been commonly believed, and not always even a difference of degree in its operation (*b*).

DCLXII. Accordingly, the following certain facts—that spasm, convulsion, tremor, inflammation from weakness, deficiency of menstruation (*c*), bleeding discharges (*d*), loss of appetite, thirst, nausea, vomiting, diarrhæa with pain, diarrhæa without pain, and all the other asthenic affections (*e*), arise from one and the same cause, that they are removed by one and the same operation of the remedies (*f*), and they do not even in the

(*b*) DIV. DVII.

(*c*) DXLV. and the following paragraph.

(*d*) DXLVIII.

(*e*) CLXXVI. to CXCIV. and to CXCVII.

(*f*) CCXXII. DLVI. DLXI. DLXXI. DLXXIII. DLXXIV. to DCCI. and from that to DCCIV. Look also carefully over the whole IVth Chapter of the second part.

succession

succession of morbid states, indicate degrees of debility in such a manner, that it can be proper to establish any arrangement upon that *mark*—they all serve to confirm the observation just made, and, by *their* analogy, to demonstrate, that fevers also are distinguished by intervals of freedom from febrile state sometimes greater, sometimes scarcely perceivable, in common with what happens to many other diseases, not from any peculiarity in the cause, but from a variation in its force. If fevers sometimes intermit in violence, sometimes exert it more remissly, and sometimes imperceptibly go on almost in a continued career (*g*) ; do they, in that respect, differ from the gout (*b*), which never goes on with an equal force, but abates from time to time ; and even, when an interval of health is interposed, returns with
more

(*g*) DCLVI.

(*b*) When the gout in the old way, is left to patience and flannel and low diet and watery drink, it shows both remissions and considerable intermissions. I have been often mortified, at finding, in consequence of walking a little too freely, when I thought the fit was gone, a more violent return than the first part had been ; when
I had

more severity than ever? Or do they differ from asthma, or from several other diseases, in all which the same thing precisely happens? And what is more usual, in indigestion, and violent vomiting (*i*), accompanied with other violent symptoms, than the intervention of intervals of the greatest relief?

The

I had not yet attained to the full knowledge of the nature and management of that disease. Which is a circumstance, that every pedagogue, who is still treated in the old way, can bear witness to. Dr. Sydenham fell a victim to his ignorance of its nature.

(*i*) A gentleman in Scotland came to dine with his brother, who lived with me and my family, in a house in the neighbourhood of Edinburgh. He ate and drank so sparingly, that I predicted, from a knowledge I had of his manner of living, which was an excess of temperance and abstemiousness to a faulty degree, that if he did not indulge a little more in these respects, he would soon fall into a disease of debility. The prediction was verified in a few days; when his brother having occasion to go to town, found him, in the intervals of a violence of vomiting, making his testament. By a good dose of the diffusible stimulus, he removed the whole disease at once, and enabled him, with the additional help of some good sound port and genuine Madeira, in a few minutes to eat heartily of beef steaks. Before his brother's arrival he had been treated in the usual evacuant, and, as they call it, the antiphlogistic way. Upon the return of his medical

The same is the nature of the chin cough (*l*), and that of the asthenic cough (*l*). In fine, where is there one of all the sthenic, or all the asthenic diseases, of which the morbid career continues the same from beginning to end? There is not one (*m*). For, as life in all

dical friends a glister was prescribed, which threw him back into his disease, from which, with the same ease and in the same short space of time, he was extricated upon his brother's return to his post. This young gentleman from that beginning, like many other of my pupils, is now a most respectable man in his profession. Some time after that, he performed the greatest cure, that ever happened since the first annals of medicine. In a very dirty ship, the Dutton, which was going to the East Indies, he stemmed, in the latitude of Rio Janeiro, a fever that was carrying off numbers every day, losing not one; as can be attested by the ship's books, for no less than five weeks—his name is Dr. Campbell.

(*k*) See DLXXIX.

(*l*) And from DLXXXVII. to DXCVII.

(*m*) All this confirms, not only the point at present meant to be settled, which is that the distinctions, that physicians have made about the differences of fevers, are without all foundation, and that they are all the same with no other difference but in degree, and that, unless in that respect, they do not differ from other diseases of the same form; but it likewise adds additional weight to
our

all its states (*n*) is always in proportion to the action of the exciting powers upon the excitability, and as both predisposition to diseases, and diseases themselves supervene in proportion as the excitement is greater or less than the proper degree ; so the course of diseases follows the same rule ; and, according to the variation of the degree of that action, is one while increased, another while diminished, another while exhibits a temporary exacerbation ; just like what happens in this sort of fevers.

DCLXIII. The cause of intermittent fe-

our fundamental proposition, that we are nothing in ourselves, but according to the powers acting on us. Many circumstances in the course of diseases, that escape the observation both of patients and physicians, are of hourly and momentary occurrence, and sufficient, when their importance is weighed according to the principles of this doctrine, to account for the variations in the progress of diseases. We shall, by and by, see that the circumstance of heat, from the gratification of indulging in which the patient is not to be turned aside by any advice, is, with its consequences upon the whole system, sufficient to account for the gradual conversion of the cold into the hot, and the hot, into the sweating, stages.

(*n*) See par. IX.

vers,

vers, then, is the same as in all astheniæ, whether febrile or not; but it is under such direction and application *to the system*, that, after an interval of some hours, all their morbid energy departs entirely, or in some degree. The reason is, that the exciting noxious powers are either removed in the same proportion, or more gentle in their operation; in one word, the excitement is increased for the time. The variation of types is not owing to any *matter*, subject to the same variation: For how, upon this supposition, could the same case run through all the forms, sometimes of intermission, sometimes of remission, and at other times nearly go on with a continued movement, and the contrary? Is the matter, which is supposed to produce any form, in order to produce another form, changed into that matter, which is supposed necessary to the latter (*o*)? Is the

(*o*) The ancients supposed, that every type arose from a matter suited to produce it. Now, suppose a quotidian type to depend upon any given matter, and a tertian upon any other, different from that; when either type is changed into the other, are we to suppose that the matter is also changed, and so forth of the rest?

vapour,

vapour, or, as they call it, the effluvium, proceeding from animals, which is supposed to produce any typhus or continued fever, and, therefore, the Ægyptian typhus, when this is changed into an intermittent or remittent nature, also, together with the change of type, changed into a marsh miasma, or impurity arising from morasses, which is supposed to produce that form of fever? Or rather does the matter, which at first produced each type, still continue the same, and become the cause of another form? If any person should fix upon the latter as the true supposition, how should the same cause produce different effects? But, if he inclines to adopt the former supposition, what proof is there, that can be admitted upon any principle of reasoning, that, as often as the form of the fever changes, so often its cause, the matter, is also changed? It has been already proved, that marsh miasmata are not the cause (*p*). And it shall be by and by evinced, that the animal effluvium, or vapour arising from the body, when affected

(*p*) DCLIX. DCLX. DCLXI.

with

with a continued fever, is not: Nay, it has been proved by the most solid arguments, that it is not any matter taken into the body, which produces disease, either in this or any case, and that the change of excitement alone is the universal source of all general diseases (*q*).

DCLXIV. As to the return of fits; it is not peculiar to this form of fevers, to have a return of the general affection after its temporary solution; the same thing happens in the gout, as often as a return of the disease succeeds a return of health (*r*), and for the same reason (*s*): For, as these diseases are repelled by invigorating means, so they are brought back by the debilitating powers, which were their first cause. Accordingly, when the disease is left to itself, or when it is treated by a debilitating plan of cure, it perseveres in returning; when it is treated with peruvian bark, and still more certainly

(*q*) See the paragraphs XXII. XXIII. LXII. and addition LXIX. LXX. LXXII. LXXIII. and LXXXVIII.

(*r*) DCLVI.

(*s*) DCLVII.

by wine and diffusible stimuli, and when that mode of cure is persisted in, till the strength is quite confirmed, it never returns.

DCLXV. The tertian vernal fevers of Scotland go off, in process of time, without medicines, first in consequence of the heat of the bed, and then, as the summer sets in, from basking in the rays of the sun, and by a moderate use of food and strong drink, their duration commonly not exceeding the space of three months. In all the southern regions, and even in England, the peruvian bark, when the whole cure is entrusted to it, often fails, and they are not removed but by very diffusible stimuli (*t*).

DCLXVI.

(*t*) Dr. Wainman, as it was said before, found that to be the case in the fens of Lincolnshire. From which we may learn how little dependence is to be had on the facts in medicine, as they are delivered from desks or in books; from both which we have always been taught to believe, that the peruvian bark was a catholicon in intermittent fevers. But, if it fails in the cure of the mild state of that disease in this country, what must we think of its efficacy in the malignant intermittents and remittents of the warm countries? And, if that medicine, with its universal high character, shall turn out

next

DCLXVI. The debility during the cold stage is the greatest, that of the hot less, and that of the sweating stage, which ends in health for the time, is the least of all. Hence, in a mild degree of the disease, as cold is the most hurtful power, its effect is gradually taken off by the agreeable heat of

next to an imposition, what are we to think of testimonies in favour of any thing? One of the ways of administering the bark is in strong wine or spirit, and it can hardly be doubted, but in that compound form it may have been of service. But where shall we find a panegyrist on the bark, who will make any allowance for the powerful medicine conjoined with it? They talk of it as a vehicle, without allowing it any other credit. In the same manner, at all times, have many powers of great operation been overlooked in the accounts given us of remedies, and the merit of the cure imputed to the most inert. I have most generally found an analogy betwixt the remedies, that are, in reality, powerful, and our ordinary supports of health. The wines and strong drinks are certainly a part of diet with most people, and so is opium among the Turks. But what analogy can be found betwixt the same ordinary supports of life, the same durable and natural stimuli, and the bark of a tree, whether brought from South America, or growing among ourselves? I will not pretend to say, that the bark is devoid of all virtue; but I must have greater proofs of its power over disease than I have yet met with, before I can retract much of what I have said.

the bed or of the sun, and the strength thereby gradually drawn forth. The heart and arteries, gradually excited by the heat, acquire vigour, and at last, having their perspiratory terminations excited by the same stimulus, the most hurtful symptom is thereby removed, the hot fit produced, and afterwards the same process carried on to the breaking out of sweat.

DCLXVII. When the force of the disease is greater, these powers are ineffectual; and, unless the most efficacious remedies are applied, the disease, instead of having intermissions, appears in the remittent state only, or even in those very obscure remissions, which give the appearance of a continued disease.

DCLXVIII. And, since in every case of considerable violence, the disease returns, because either the less force, by which it is kept up, is not stopt by a proportionate force of remedies, or a greater force of disease by a greater force of remedies (*u*); the remedies should be given both before the cold fit, and

(*u*) For the curative force must be always accommodated to the morbidic, or cause of the disease. See above XCII. CIX.

during it, as also through the whole course of the intermission to the next paroxysm, and they should be continued even through this, and after it is over. Lastly, like the practice in every other cure of asthenic diseases, we should gradually recede from the use of the highest stimuli, in proportion as the body can be supported by the less and more natural (*x*).

Of the severe Dysentery.

DCLXIX. The severe dysentery, or bloody-flux, is an asthenia; in which, besides the symptoms in common to that whole form of diseases, so often repeated, there are griping pains in the intestines, innumerable dejections, chiefly mucous, sometimes bloody, for the most part without the matter that naturally passes that way; all which symptoms often occur after contagion has been applied.

(*x*) CV, and CVII,

Of the severe Cholera.

DCLXX. The severe cholera adds to the common symptoms of every asthma, those of vomiting and purging alternately with great violence; which discharges for the most part consist of bilious matter.

Of Synochus.

DCLXXI. Synochus is a very mild typhus, such as chiefly occurs in cold countries and cold seasons; in the beginning deceiving physicians by a certain but a false resemblance to synocha.

Of the simple Typhus or Nervous Fevers.

DCLXXII. The simple typhus, or nervous fever, is such a synochus, as appears in warm countries or seasons, but somewhat more severe, and yet sufficiently simple.

Of

Of the Cynanche Gangrenosa.

DCLXXIII. The gangrenous cynanche is a typhus, a little more severe than the simple typhus or nervous fever, with an eruption upon the skin, and a red tumid inflammation of the throat, and with mucous crusts of a whitish colour, concealing ulcers below them. The angina, formerly mentioned (y), in its termination equals or exceeds the violence of this disease.

Of the confluent Small-pox.

DCLXXIV. The confluent small-pox is a typhus chiefly depending upon indirect debility. It is preceded by a great eruption of the distinct kind, and an universal crust of local inflammation over the whole body; these, by their local and violent stimulus, convert the sthenic into the asthenic diathesis, and the inflammatory affection into a gan-

(y) CCXII. CCXIV.

grenous one. Its cure is to be conducted upon the stimulant or antisthenic plan, but in such a way, however, as is suitable to indirect debility.

Of the pestilential Typhus, the jail, putrid, or petechial Fever, and the Plague.

DCLXXV. The pestilential typhus, or the jail, putrid, and petechial fever, is an asthenic disease of the highest debility, scarce excepting the plague itself; the surface of the body is first dry, pale, hot, shrivelled; then, chiefly towards the end, moist, diversified with spots and vibices or long strokes like those laid on by a whip, and the body itself is wasted with colliquative diarrhœa; the stomach is affected with want of appetite, loathing of food, nausea, often with vomiting; the belly is first rather bound, and then, as it has been said, subject to colliquative evacuation; the intellectual function is first impaired, then becomes incoherent, afterwards delirious, and that often in the highest degree; the spirits are dejected

jected and wasted with sadness and melancholy ; the voluntary motions are early impaired, and then so destroyed, that the patient cannot support himself in posture in bed by his own muscles, or prevent himself from slipping down, from time to time, from the upper to the lower part, while the senses are either blunted, or preternaturally acute. In fine, the urine, the fæces, the breath, and all the excrementitious discharges, have a singular foetid smell.

DCLXXVI. The plague begins, holds on in its course, and ends with similar symptoms: To which, however, carbuncles, buboes, and anthraces, or fiery sores, are added. These are most frequent in the plague, but not so confined to it, as to be excluded from the pestilential fever (z).

DCLXXVII. Contagious matter sometimes accompanies typhus, always the plague: The former is of a common nature, or such as is liable to happen in any part of the globe ; the latter is thought peculiar to the eastern part of Europe, and the western of

(z) CCXIX.

Asia,

Asia, possessed by the Turks, called the Levant.

DCLXXVIII. With respect to the contagious matter of typhus; the corruption of the fluids is by no means to be imputed to it (*a*), nor is heat so much to be blamed; for cold has an equal power in producing this effect as heat (*b*), as has also every thing, as well as heat, that either directly, like cold, or indirectly like heat, debilitates (*c*). Nay, the emptiness of the vessels, from want of food, or from the incapability of the digestive organs to take it in and assimilate it, as also that debility which is induced by melancholy and grief, though, in these cases, no matter at all is present, admit of the same application. On account of the debility in the extreme vessels, internally, as well as externally, and, therefore, in those of the alimentary canal especially, and in the perspiratory vessels, the fluids stagnate; and by stagnating in the heat of the body, degene-

(*a*) See above CXV. CXXII. CCXXXVI. and the addition I.

(*b*) Ibid. and CCLXI.

(*c*) See again CCXXXVI. and the addition at I.

rate into that quality, which, in a more extensive sense, is called corruption, but in a more uncertain one, putrefaction (*d*).

DCLXXIX. The cause of all these diseases is the same with that of diseases not febrile, to wit, debility; differing only in this, that it is the greatest debility compatible with life, and not long compatible with it.

DCLXXX. The indication also of cure is the same as in the other *astheniæ*, but it must

(*d*) There are three states or qualities produced in fluids by as many different fermentations, the saccharine, acid and putrefactive. To one or other of these we are apt to refer every state of corruption in our fluids; but they are liable to degeneracies, which do not exactly correspond to any of them: And, as we are not yet acquainted with any of these deviations from the natural state, it is safer to use the general term corruption. Even the word acrimony is too general, as we can by no means pretend to say, that perfect blandness is the natural and healthy state of our fluids: Nay, the different uses and subserviency to the functions seem to require a considerable deviation from blandness; the urine, the perspirable fluid, the bile, and others, being intended, by a certain poignancy, to answer certain purposes. These, compared to certain blander fluids, may be said to be acrid; while compared to themselves in a state of morbid degeneracy, they may be called bland in the natural state, and in the latter acrid.

be

be conducted with a good deal more attention than is necessary in them, upon account of their much greater mildness (*e*). It is, then, debility alone, that is to be regarded in the cure; and stimulant or antisthenic remedies alone, that are to be administered. Nor is there occasion for any distinction in the method of cure, but what direct or indirect debility requires (*f*).

DCLXXXI. The indirectly debilitating powers, are the violent and local stimulus of the eruption in the confluent small-pox (*g*) so often inducing prostration of strength, drunkenness (*h*), heat (*i*), or long continued

(*e*) Fevers will require many more visits from the physician than are commonly either bestowed or required, and often a good deal of watching. While this is more generally the case in fevers, at least in the high degree in which these fevers exist, at the same time they are not the only ones that require such strict attention; as every disease, when it has attained to the same degree of debility, endangering life, will claim the same circumspection and vigilance from the judicious and conscientious physician.

(*f*) See par. CIII. CVII.

(*g*) See CLXXV. CCXV. CCXVI. CCXVII. CCXVIII.

(*h*) CXXX, and addition.

(*i*) See CXV.

luxury,

luxury (*k*). To these noxious powers, thus indirectly debilitating, all the others may more or less be added (*l*).

DCLXXXII. And as it never happens, that either direct or indirect debility alone proves hurtful, hence we have a third case given, where we have to combat both sorts of debility (*m*).

DCLXXXIII.

(*k*) See above par. CXXVII. and addition.

(*l*) Look for them in Part I. Chap. I.

(*m*) Suppose any direct debility has occasioned a disease, when that is established, the excitability is so morbidly accumulated, that the slightest exertion of any exciting power becomes too much for it; which immediately constitutes an admixture of indirect debility. The stimulus of corporeal motion, which is a great and rough indirectly debilitating power, is often too long continued, after a typhus fever has begun its insidious attack upon the habit; and hence the after-part of the disease becomes more severe and dangerous. It is also to the same cause that we owe the propriety of excluding light and sound, when they prove causes of irritation; their stimulus, though slight, being too strong for the accumulated excitability. The guarding against gusts of passion and emotion, as well as mental exertion, is all upon the same principle. When a person falls into a fever from excessive labour and low diet at the same time, that is an instance of a mixture of debility from the beginning. Again, when any disease, chiefly of indirect debility, is treated by
bleeding,

DCLXXXIII. The directly debilitating powers are known; to wit, cold (*m*), low diet (*n*), bleeding, and other evacuations (*o*),

bleeding, other evacuations, and starving, that is an instance of a superinducement of direct upon indirect debility. A judicious practitioner, and who prescribes according to the rules that arise from a near acquaintance with the operations of the inanimate part of matter upon living systems, will find plenty of scope for the exercise of his judgment in these and many other niceties: And he will find, that the Brunonian doctrine, as it is now nick-named by those who know it not, is not a doctrine to be practised without knowledge, without judgment, and without sense; but that it requires every part of knowledge requisite to throw light upon so extensive a subject, as that of the science of life over all nature, and all the judgment and good sense of the soundest understanding to carry it into application upon many occasions of nicety and difficulty. The trash that has hitherto too often passed for knowledge, is to be acknowledged not only useless, but hurtful. But the true knowledge of nature must be always elegant, always satisfactory, always useful. It is to be hoped that the day is not far distant, when this doctrine will change its present appellation, into that of the doctrine of Nature, over the living part of her productions; comprehending not only the morbid but healthy phenomena, and the distinctions between the living and dead state.

(*m*) See par. CXVII.

(*n*) CXXVIII.

(*o*) CXXXIV. CXXXVII. and the addition.

rest.

rest of body and mind, want of passion and emotion(*p*), and impure air(*q*).

DCLXXXIV. As both those sets of powers act by debilitating; be, at the same time, on your guard against believing, that some of them are septic, and prove hurtful by fermentation, and are to be cured by antiseptics, or powers that resist putrefaction; and that, among the former, heat is to be reckoned; among the latter, cold, wine, the peruvian bark, and acids(*r*).

DCLXXXV. In the mild cases, as in the agues of cold places, and especially the vernal agues(*s*), and likewise in synochus, in the simple typhus, and in the plague itself, when mild; scarce any stronger stimulus than wine is required; and the rest of the treatment is to be conducted according to the directions so often laid down for the mild asthenic diseases.

(*p*) CXXXVII. and addition, and CXXXIX. and CXLII.

(*q*) CXLVI. Compare the whole with Part II. Chap. X. all from CCXC. to CCCXII. and from that to par. CCCXV.

(*r*) See par. DCLXXVIII.

(*s*) See DCLVI. DCLX. DCLXV.

DCLXXXVI.

DCLXXXVI. In the most severe fevers, such as the remittent, which is frequent in the warmer regions of the earth and in the torrid zone, in the severe typhus, when it is pestilential, in the very violent dysentery and cholera of the same places, and in the most violent plague itself (*t*), the cause of all which affections is in general direct debility; or in milder cases of the same disease at first, and that have acquired a great deal of virulence in their progress from the neglect of the proper, or the use of an improper plan of cure; we ought immediately to begin with the highest diffusible stimuli, such as opium, volatile alkali, musk, and æther, in small doses, but often repeated (*u*); and afterwards, when the strength is restored, and the force of the stomach confirmed by their use, to proceed to food, drink, gestation, pure air, cheerfulness, and, last of all, to the usual offices and occupations of life.

DCLXXXVII. When indirect debility has had more concern in the case, as in agues, or more continued fevers, occasioned by

(*t*) DCLVI. DCLXVI. DCLXIX. DCLXX.

(*u*) XLI. XLIII. CXIII. DCLXVI. to DCLXIX.

drunkenness,

drunkenness, and in the confluent small-pox; the same remedies are to be employed, but in an inverted proportion of dose. We should, consequently, set out here in the cure with the largest doses, such as are next in effect to that degree of stimulus, which produced the disease (α); then recourse should be had to less stimuli, and a greater number of them, till,

(α) This may be exemplified by the treatment of a person the next and second day after he has been hurt by drinking. His excitability has been worn out by an unusually strong stimulus, the effect of the first night's sleep is to allow it to accumulate again: In this state much exercise fatigues, for want of excitement to enable it to be borne: Fluid nourishment is commonly used, but it is not strong enough to waste the redundancy of excitability, and bring the patient back to his healthy excitement. The dram drinkers know the remedy, but they know not its bounds. They have recourse to a glass of strong spirit, and they would be right if they stopped at one, two, or a very few, according to the quantity that their former habit may render necessary, and take no more than what gave them an appetite for solid nourishing animal food; which, whatever the quantity that is required to produce it be, is the best general rule: But they go on, and every day till that of their death, which soon arrives, renew the disease. The rule is to take a little of what proved hurtful, till a return of

till, as was said just now (*y*), the strength can be supported by the accustomary and natural stimuli (*z*).

DCLXXXVIII. To give some estimate of the dose in both cases (*a*); in direct debility, where the redundancy of excitability does

appetite comes on: After eating a little, a walk or a ride will add more stimulus: The air, in which the exercise or gestation is performed, will furnish another. In that way, more strength will be acquired in proportion as a greater number of stimuli have wasted more excitability, and with more equality. A second day's management, by applying the stimuli in a still less degree, will commonly remove all the complaints. When an habit of hard drinking has brought on, as it always will sooner or later, a very bad and confirmed disease; if the excitability is nearly worn out, and what remains is very unequal, as having been produced chiefly by an alternation betwixt one stimulus acting with partial excess and sleep, either imperfectly removing the excess, or by its length superadding direct to the indirect debility, which the drink occasions; the patient should have a somewhat less quantity, than that which at any time hurts him; then the next day still less; and so on, till very little will serve him; and he should add all the other stimuli in proportion as he diminishes the morbid one.

(*y*) DCLXXXVI.

(*z*) CCCVIII. to CCCXII.

(*a*) DCLXXXI. and DCLXXXII.

not

not admit of much stimulus at a time (*a*),
ten or twelve drops of laudanum every
quarter

(*a*) The abundant excitability of an infant cannot be reduced at once to that wasted degree, in which the strength of an adult consists; it must be by the gradual application of what it can bear always for the present time that that can be brought about; and, therefore, not sooner than a space of time equal to half the individual's given period of existence. In a similar manner, an excitability that has been accumulated from deficiency of stimuli for a number of weeks or months, will require a space of time, somewhat proportioned to that, to wear it out in the manner most suitable, to restore the lost vigour. Some health will be sooner brought about, but the effectuating of perfect health must be a work of time. Again, the direct debility of a few days will be easily removed in a few days. In fevers, and every case of high debility, the accumulation of excitability for want of stimulant power to produce excitement, must be estimated by the number of stimuli that have been withheld, as well as the degree of force of each of them. In a fever, then, the stimulus of exercise, of the open air, of conversation, of diversion of every kind, of an agreeable flow of spirits, of a pleasant train of thinking, of light and sound in a great measure, as well as of the exercise of all the other senses, and particularly the stimulus of a due quantity of blood, and other fluids, and most especially that of nourishing food, and, at least upon the common plan of practice, that of wine and exhilarating drink, all these are withheld; and, there-
Y 2 fore,

quarter of an hour, till the patient, if, as is usually the case, in such a high degree of debility,

fore, for want of them, the diminution of excitement must both be great and unequal. What then is required as to the idea of the cure? Since most of those, which are the ordinary stimuli, by which the ordinary health is supported, cannot be applied; the proper idea is to look out for a power in nature, that can, as nearly as possible, supply both the degree and equality of stimulant operation that is wanted. Such a power we find in the few diffusible stimuli, and particularly in opium (see par. CXXX. and the additions). Any of these act powerfully on the stomach, and diffuse proportional excitement over the system. So soon and effectually do they pervade it, and act with the most powerful effect upon the surface, that it is often an object of attention in the practice to think of means to prevent it from going too far. By the blessed use of these remedies, the excitement of the stomach is restored, so that, with a return of appetite, food can be taken in, and digested, in so far as the powers of that organ go; which are confined chiefly to the first part of digestion, or what is called the first concoction. Next the excitement is restored in the other digestive organs, in the duodenum, in the biliary vessels, the pancreatic duct, in the lacteal vessels, through their whole course from the intestines to their common receptacle, as all the vessels that return lymph from every part of the body, in the veins betwixt the thoracic duct and the heart, in all the cavities of the latter, in all the red arteries, in the colourless terminations of all these, whether
exhalant

debility, he has wanted sleep long (*b*), falls asleep : Afterwards, when some vigour is produced

exhalant or glandular, and whether only simply separating, or also changing, the property of the fluid they secrete, in all the internal cavities of the body, in the commencing extremities of the absorbent vessels, and in their progress through their lymphatic trunks to the receptacle in common to them with the lacteals, which are a part of their number, in the thoracic duct again ; as also from that to the heart, and from the heart to the extremities of the arteries : Lastly, the influence of excitement is extended to those terminations of the arterial system, whether exhalant or glandular, which perform the several functions of excrementitious secretion and excretion, by which every portion of fluids, now become useless, or, if they were retained, hurtful to the system, are thrown out by their several emunctories. When, by the use of the diffusible stimuli, the stomach and all the organs can perform their respective functions, the natural stimuli begin to be restored ; the stomach, the intestines, the lacteals and blood vessels, and all the other vessels, are gradually filled with their respective fluids ; the muscles on the surface, and the muscular fibres, recover their tone and density ; the brain recovers its vigour ; heat and air can be now restored to the surface ; exercise can now add its useful stimulus ; and all the functions return to their usual capability of being acted upon by the usual and ordinary exciting powers.

(*b*) Want of sleep is an indirectly debilitating power ; and, in this weakened state of the system, in this redundancy

produced both by that and the medicine, and some of the excessive excitability is worn off, a double quantity of the diffusible stimulus should be added, and, in that way, gradually increased, till the healthy state can be supported by stimuli less in degree, more in number, and more natural (*c*).

DCLXXXIX. In indirect debility an hundred and fifty drops of laudanum should forthwith be thrown in; and then less and less, till we arrive at the boundary just mentioned (*d*). Both the measures recommended (*e*) are in general applicable to adults; but less will suffice at an early or late age. Nay, the rule further varies according to the habit,

dancy of excitability, where every exciting power is liable to be too much for the excitability, the want of sleep, by not allowing this partial waste of excitability to be repaired, is the occasion of so much more indirect debility being added to the direct; and hence the sum total of debility is increased. The effect of sleep in removing this partial indirect debility becomes so far an invigorating power.

(*c*) See above par. CIII. and CVII.

(*d*) DCLXXXVIII.

(*e*) In par. DCLXXXVIII. and this.

the

the way of life, the nature of the place, and the peculiarities of the patient (*f*).

DCXC. And since the use of the diffusible stimuli only succeeds, when life cannot be preserved by the usual stimuli and those more congruous to nature, and a due quantity of blood and other stimuli soon become sufficient to complete the healthy state; we

(*f*) When the habit is delicate, the patient's way of life moderate as to the use of the stimuli, the place cold, or both cold and moist, and the patient easily affected with stimuli of all kinds; in all these cases the rule, which common sense prescribes, is to diminish the dose of the diffusible. A lady in Edinburgh, who had borne and nursed many children, had lived exceedingly moderately, had been and still was very assiduous in the management of her family affairs, and usually stimulated with little air out of her own house, fell into a colic, and, by the evacuant and starving plan, had been kept in it for a full month, till the urgent symptom of vomiting required further assistance: When I came, I first retarded the vomiting by a glass of whisky: And, by two more, with no other help but that of a mixture containing thirty drops of the thebaic tincture, which the surgeon had been administering in miserably small portions, in three hours removed the whole disease. As I have said somewhere before, the disease, from her neglect in following directions, had very nigh returned next day; but another glass repelled it.

should, on that account, even from the beginning immediately give animal food, if not in a solid form, in which it can neither be taken nor digested, at least in a fluid form, as soups; which should be alternated with every dose of the diffusible stimulus: Then, in a gradual way, according to the return of vigour, first a very little of something solid, and afterwards more and more, should be thrown in, and the other stimuli, each at its proper time, brought into play; till the whole treatment terminate in the way of life commonly observed in good health, where there is less occasion for medical injunctions.

DCXCI. When the affection is more a mixture of both sorts of debility, these proportions of the doses must be blended together.

DCXCII. Contagion, which either adds nothing to the effect of the usual noxious powers, or proves hurtful by the same operation by which they act, is not otherwise to be regarded, than that time be allowed for its passing out by the pores, together with the perspiratory fluid; on which account the perspiration must be properly supported; which,

which, as it is effected by stimulating, is no addition to the general indication (*g*).

DCXCIII. Lastly, the corruption of the fluids in the extreme vessels must be obviated (*b*), not by means that may be supposed to have a direct tendency to remove it, but by powers that act upon the excitement of the solids, and that increase excitement over the whole body, and, therefore, among other parts, in the affected vessels.

DCXXIV. Having now gone over the whole scale of decreasing exciting power from peripneumony to the plague, and from death by indirect, to death by direct, debility; and having so executed the work, as to present the public with a new science, if not finished in an elaborate, elegant, and highly polished manner, at least distinct in its outlines, and, like a rough statue, to be polished afterwards, but in some measure fashioned in all its limbs, and embracing a plan, connected in all its parts; we must next pass to the consideration of local diseases.

(*g*) See LXXXVIII. XCVIII.

(*b*) CCXXXVI. addition at I. and CCLXXIV.

THE FIFTH AND LAST PART.

LOCAL DISEASES.

CHAP. I.

Of Local Diseases.

DCXCV. **L**OCAL diseases(*a*) are divided, according to the order of nature, into five parts; of which the first consists of organic affections, where no disease over the whole system arises, none but in the hurt part. This is a sort of affection, that happens in parts less sensible, according to common language, or more devoid of excitability.

(*a*) V. VI. VII.

DCXCVI.

DCXCVI. The second part, likewise consisting of organic affections, occurs in parts of the system, whether internal, or external, that are very sensible or endued with a great deal of excitability (*b*) ; where the effect of the local affection is propagated over the whole body, over the whole nervous system, and where a great many symptoms arise, similar to those which occur in universal diseases.

DCXCVII. The third sort of local diseases takes place when a symptom of general

(*b*) The excitability is here not talked of in its comparative states of abundance or deficiency, but in the degree in which any part possesses it in preference to other parts. It is used in the sense of the greater or less vitality of parts : Accordingly we can say, that some parts possess an exquisite sensibility, as the stomach, the brain, and intestines, and, I believe, most of the interior, soft, fleshy parts, and the shut cavities ; and externally, the parts immediately under the nails ; that others possess less, as the bones, ligaments, and cartilages and ligaments ; and externally, the cuticle, or scarf-skin. It is, with respect to the difference of sensibility, or excitability, or capability, to be acted upon by exciting powers, that we use the expression of more or less excitability. See above par. XLIX. and the addition, and LIII. and addition.

disease,

disease, that at first arose from increased or diminished excitement (*c*), arrives at that height, at which, being no longer under the influence of excitement, it cannot be affected by remedies that correct the excitement.

DCXCVIII. The fourth division of local diseases consists of those, in which a contagion, externally applied to the body, is diffused over all, without affecting the excitement (*d*).

DCXCIX. The fifth sort of local diseases arises from poisons that have been applied to the body, and flow through all the vessels in such a manner, that they are understood not immediately, nor at first, to have any tendency either to increase or diminish the excitement, but falling upon parts, some on one, some on another, injure the texture of these in different ways; and afterwards, by means of this local injury, produce disturbance over the rest of the body.

(*c*) like all the other symptoms, of which it was one,

(*d*) If it affected the excitement, its effect would be general disease, which sometimes happens, as in the small-pox, measles, contagious typhus, and the plague.

C H A P. II.

The first Part of Organic Local Diseases, or those where no Effect, but in the hurt Part, arises.

DCC. WITH regard to the first division of local, organic diseases; the noxious powers, that produce them, are such as produce a solution of the continuity of a part, by wounding, eroding, or poisoning; or that derange a part by contusion, compression, or spraining.

DCCI. The powers, producing a solution of continuity, are all cutting, pricking, or missive, weapons: Acrid bodies and poisons produce solution of continuity in another manner.

DCCII. When any of these powers slightly divide the surface, and scarcely, if at all, reach the bottom of the skin; for the cure of so trifling an affection, there is occasion for nothing but shutting out the air, and avoiding cold, excessive heat, and every irritating

ritating substance. For the only use of the cuticle is, by means of its insensibility (*a*), (it being a simple not a living solid, and devoid of all excitability), to keep off the air, and all excess of temperature, and every rough or rude matter, which are all inimical to living solids (*b*), whether external or internal.

DCCIII. When the surface, therefore, is injured in its texture, either by being cut, or bit, or stung by venomous animals, or by being burned, or by a very high degree of cold; in that case a thin, mild, oily plaster is sufficient for the cure.

DCCIV. The division, therefore, of phlegmasiæ, into phlegmone and erythema, is with-

(*a*) See DCXCVI. and the note.

(*b*) So hurtful is the air and temperature to all parts below the cuticle, that nothing is a more certain cause of gangrene than their exposure, even for a very short space of time: Nor is there any other way of accounting for the fatal effect of slight, superficial, but extensive burning. Death has been the consequence of a burn, that extended no further than the fore part of the thorax, or the breast, and was not of longer continuance than the time taken to tear off the burning clothes that occasioned it.

out

out foundation, and misleads, both as to the cause and cure (*c*): For, however much they differ in their remote cause, as they call it, in their seat, and in their appearance; since the exclusion of the air and of other stimuli is an effectual cure; it follows, that their cause is the same; that is, that the nature of all these affections is the same.

DCCV. In the cure of contusion, compression, and sprains (*d*), the remedies are the same in general; there is occasion for rest of body besides, and bland tepid fomentations.

DCCVI. Through this whole division of local affections, there is a certain energy of nature, that tends to the restoration of the healthy state; but it is not the celebrated vis

(*c*) See the seventh Genus in *Genera Morborum Culeni*, where you will find Linnæus's prototype of inflammation, that is, of inflammatory diseases, or what is in this work called phlegmasiæ, or sthenic diseases with inflammation, or an approach to it, also adopted by this author. It is nothing else but a collection of local affections, or, in a few cases, symptoms of disease, and they almost all come under this head of local diseases, and every one of them under one of these heads.

(*d*) See par. DCC.

medicatrix

medicatrix naturæ of physicians: For in this case nothing else happens, but what equally happens in the cure of general diseases. If proper remedies are applied, the sound state in both sorts of diseases follows: If the remedies be neglected, the solution of continuity degenerates into a worse and worse nature, and then into gangrene, or the death of the part (*e*). It is the excitability, or that property of life, by which the functions are produced (*f*), that, wherever life, whether in

(*e*) Of this we are presented with examples in every day's experience; where we find the slightest sores, from the neglect of the simple rule of cure laid down here, degenerate into very troublesome affections.

(*f*) See above par. X. to XIV. If I cure a peripneumony by bleeding, other evacuations, and other debilitating powers, that are not evacuant, it is by diminishing the force of exciting power; if I cure a fever by opiates and other stimulant powers, whether stimulating by filling the vessels, or without that, it is by increasing the same force; and if I cure a sore on the surface, by the method just now mentioned, I thereby prevent the force of exciting power from rising too high, from an excess of stimuli, or from running either into direct or indirect debility, from too little stimulus, or an ultimate excess. If either these general or local cures are neglected, or mismanaged,

in a part, or over the whole body, is injured, procures the return of the healthy state by means of the external powers acting upon it. It is, then, the excitability, affected by the action of those powers, that is to say, the excitement, that governs the state of the solids, both in parts, and over the whole body.

mismanaged, the cure will not be supplied by any effort of the system; and if the cure is made out by regulating the excitement, such effort is superfluous. The vis medicatrix, then, is as little real in local as general diseases. See above par. LXII. and the addition.

C H A P. III.

The second Division of Local Diseases.

DCCVII. THE local organic diseases of the second division are the inflammation of the stomach (*a*), and of the intestines (*b*); as also discharge of blood, with an inflammation subsequent to it; and, in fine, an inflammation in any very sensible part, in consequence of a wound, producing commotion over the whole body.

Of the Inflammation in the Stomach.

DCCVIII. The principal symptoms in gastritis are, pain in the region of the stomach, a burning heat, deep seated, increased by every thing that is either eaten or drunk, or in any shape taken into the stomach;

(*a*) or gastritis.

(*b*) or enteritis.

hiccup,

hiccup, an inclination to vomiting, and the sudden rejection of what is taken in; and the pulse soon becoming weak, quick, and rather hard.

DCCIX. The exciting noxious powers, which produce the solution of continuity in this case, are such as act by cutting, pricking, or erosion. Such are the small bones of fishes, ground glass, or Cayenne pepper and such things.

DCCX. Inflammation is a consequence of the wound or erosion made by these exciting powers: The effect of inflammation in that very sensible organ, the stomach, is to diffuse the disturbance before mentioned (*c*) over the whole system. The burning heat and pain, inseparable from inflammation, and the anxiety (*d*), are the offspring of the inflammation (*e*): Of these, the anxiety is more peculiar to the stomach, its accustomary seat (*f*), and the pulse becomes such as has

(*c*) DCXCVI.

(*d*) CLXXI. CCCXLV.

(*e*) CLXXI.

(*f*) CCCXLV.

been described, because it is peculiar to every rude, fixed, and permanent local stimulus (*g*), to weaken so much the more, the greater the excitability of the part is. Hence, in the external parts of the body, that are less endowed with excitability, a pretty considerable inflammation by no means affects the pulse or the body generally; though even there, when a part is sensible, as in the case of a burn of any extent, or of a thorn thrust under the nail, an equal disturbance arises over the whole body (*b*), which confirms a former proposition, in which it is asserted, that the more abundant the excitability (*i*), the less stimulus can be borne.

DCCXI. The disease is easily known, both from the symptoms above described, but still more certainly from the known deglutition of the noxious power; and, over and above, by this particular sign, that, as it has been said before, without such an ac-

(*g*) XVII. and the addition.

(*b*) CCCXLIV. CCCXLV.

(*i*) XXXVI.

cident,

cident, inflammation scarcely seizes upon an internal and close part (*k*).

DCCXII. As this is a local disease, and does not, like general diseases, depend upon the increase or diminution of excitement; the indication suited to the latter, to wit, *to diminish increased, or increase diminished, excitement over all*, will not apply. On the contrary, unless a general disease happen to be combined with it, nothing else is to be done, but, by throwing in bland, demulcent liquors, to defend the tender part from the rude contact of the stomach's contents, and give the inflammation time to finish its

(*k*) CXIII. and CLXVIII. The stomach is sometimes inflamed from a scirrhus tumour occupying the pylorus; and that case also is taken in by the systematic and nosological writers, as belonging to their gastritis: But the consideration of it does not belong to this head of local diseases, but to the third division of them. At the same time, both it and the present case are local diseases, and not phlegmasiæ, differing from the phlegmasiæ so fully treated of in the third part of this work. It, as well as enteritis, of which we are next to speak, has every mark of difference from the general diseases mentioned in the Vth paragraph. See also Chap. I. of the fifth Part.

course; and, if the physician is called soon enough, to wash off the hurtful matter with diluent liquids.

Of Inflammation in the Intestines.

DCCXIII. The inflammation in the intestines is a local affection; in which there is an acute pain in the belly, and distention, and sometimes a sort of pain twisting around the navel, with vomiting, and obstinate constiveness, and such a pulse as in the inflammation of the stomach.

DCCXIV. The noxious powers, exciting this disease, are precisely the same as those that have been said to excite the inflammation of the stomach.

DCCXV. The inflammation arises in a similar manner, as in the inflammation of the stomach, and the more readily, as the intestines are more sensible than the stomach (*l*). Hence, also, a state of disturb-

(*l*) Baron de Haller, from some experiments that he made, found the intestines more sensible than most parts of the body, more than the stomach, and equal in sensibility to the brain.

ance is, in a similar manner, diffused over the whole body.

DCCXVI. The acute pain of the belly depends upon the inflammation: The distention and costiveness are the offspring of the detained fæces. The cause of the vomiting is the same; for the peristaltic motion being prevented, upon account of the obstruction, from proceeding downward in its usual way, from its restless nature proceeds upwards; it indeed affects neither direction, unless in so far as the stimulus, by the impulse of which it is regulated, either commences from above, as health requires, or from below, as happens in other diseases and in this disease in particular(*m*). The twisting pain about the navel is produced by the inflammation; for the principal, and by far the greatest part of the intestines, are thrown in a convoluted state about the navel.

DCCXVII. The diagnosis is the same as in the gastritis; excepting, that seeds, hairs, and similar foreign bodies, sometimes upon account of the torpor of the peristaltic mo-

(*m*) See par. CLXXVIII. CLXXXIX.

tion, adhere to the sides of the intestinal canal, and gradually, by their irritation, kindle up an inflammation: A fact that, if examined attentively and once rightly considered, will not render our diagnosis doubtful.

DCCXVIII. The cure is precisely the same as in the inflammation of the stomach.

DCCXIX. None of the rest of the pretended phlegmasiæ, distinguished by the appellation of *miles*, as the splenitis or inflammation of the spleen, hepatitis or the inflammation of the liver, the true nephritis or inflammation of the kidneys, the cystitis or inflammation of the bladder of urine without a stone, or the hysteritis not arising from scirrhus or inflammation of the uterus, or the peritonitis or inflammation of the peritonæum, belong to this place; as, besides the doubt of these parts ever being inflamed, no inflammation at least arises from stimulants and acids, neither of which have access to the shut viscera, for these substances are not carried in the vessels, nor can they be carried in them. All local affection here must come from the relics of other diseases—of these we are to speak afterwards—with the following exception.

DCCXX.

DCCXX. The exception is, if any one falls from a height, if he is run through any part of his bowels with a sword, if a poisoned arrow, thrown by any savage, has pierced any of his inward parts, he will, in

DCCXXI. The case of the inflammation affecting the liver, be affected with a pain in his right hypochondrium, with vomiting and hiccup : If

DCCXXII. The inflammation affect his spleen, the pain will be in his left hypochondrium ; in

DCCXXIII. The case of the true nephritis, or inflammation of one of the kidneys, he will feel pain in the region of the kidney, and be seized with vomiting, and a numbness of his leg ; in

DCCXXIV. The case of the inflammation happening in his bladder, he will have a tumour and pain in the lower part of the belly.

DCCXXV. Discharge of blood, followed by inflammation (*n*), such as happens in the

(*n*) DCCVII.

inflammation

inflammation of the uterus, or of any neighbouring part, in abortion, and from a wound of any internal part, is easily distinguished by the pain of the affected part, and by the accident that precedes.

DCCXXVI. In the inflammation of the uterus, or any neighbouring part, the lower belly is affected with heat, tension, tumour, pain, and these symptoms are accompanied with vomiting (*o*).

DCCXXVII. The noxious powers, that excite the hysteritis, or inflammation of the uterus and parts in its neighbourhood, all amount to violence done to the uterus. Thus, using violence during labour, hurrying the birth, often produce a solution of continuity, and wound the uterus.

DCCXXVIII. And, since a great deal of blood is often lost in this way, and the local affection is followed by debility of the whole

(*o*) The inflammation is frequently not in the uterus, but in a neighbouring portion of the intestines, or mesocolon, or in the peritoneum itself, as dissection has frequently shown. This is a disease, than which none has been more inquired into, and none yet less understood.

system ;

system(*p*); neither bleeding, according to the common practice, nor any mode of evacuation is to be practised, nor is the patient to be forbidden to eat; but, in the first place, regard is to be had to the affected part, the body must be laid in a horizontal posture, the patient must be kept from motion, and be allowed rich soups and wine: By and by more solid animal food should be used, morsel by morsel, but frequently repeated, and the belly should be bathed: And, if the debility should increase, recourse must be had to more wine, liquors still stronger, and opiates: The use of which last should not be neglected, even at first.

Of Abortion.

DCCXXIX. In abortion, the back, the loins, the belly, are pained in labour; and there is either an unusual flow of the menses, or an extraordinary discharge from the vagina.

(*p*) Pain and loss of blood are in one degree or another inevitable causes of debility.

DCCXXX.

DCCXXX. The powers, that force abortion, are falling from a height, slipping, a rash step, intense walking, running, going up and down hill. This disease seldom, however, happens but to persons previously weak; and the most powerful agent in bringing it on, is some taint left since a former abortion, which increases in proportion to the number of abortions. When the disease happens in consequence of the local noxious powers, just mentioned, it is perfectly local: But when debility is blended with the effect of those powers, it is a case of combination of general with local affection.

DCCXXXI. The indication for preventing the disease is, to guard against all the noxious powers that induce the disease; to ride out, when the patient has any degree of strength; but, in case of any apprehension of danger from weakness, to go in a carriage, which will be more safe; to be cautious from the third month of pregnancy till the seventh is passed; to invigorate the system, and keep up the patient's spirits, and intellectual amusements.

DCCXXXII.

DCCXXXII. The indication of cure is, to keep the body in an horizontal position, with the buttocks higher than the head ; to be studious to keep the patient easy in body and mind ; to repair the loss of blood with soups ; to secure the vessels, for the purpose of contracting their large diameters, with wine and opiates, and, in that way, take off, at the same time, the atony and laxity, which are the principal causes of the discharge.

Of difficult Labour.

DCCXXXIII. In difficult labour, the most common cause of which by far is weakness, and which always produces weakness when it proves lingering ; the patient should be supported with wine ; and when the labour proves more difficult, and threatens to be tedious, opium should be administered.

DCCXXXIV. When some part of the uterus is injured by the powers that have been mentioned (*q*), and the child and placenta are

(*q*) See par. DCCXXX.

now

now both delivered, the patient should be kept in an horizontal posture, as was recommended in abortion; she should be invigorated by soups, chicken, wine, and the still higher stimuli; every thing of a contrary nature should be avoided; and the healing up of the wound waited for.

Of deep-seated Wounds.

DCCXXXV. In deep-seated, or gun-shot wounds, when the ball, if a ball occasioned the wound, is extracted, or though it still remains in the body, if it be in a place not necessary to life; first of all the whole system is very much irritated, heated, pained, chafed, and distressed with restlessness and tossing; the pulse is strong, full, and more frequent than in health. The cause of all these symptoms is the commotion, which, as we have said, the local stimulus, either of the ball or of the inflammation supervening upon the wound, by its constant irritation of a sensible part, gives to the whole system.

DCCXXXVI.

DCCXXXVI. Because in this case a sthenic diathesis is commonly supposed to arise over the whole body, upon account of the irritation from the wound; the antisthenic plan of cure is, therefore, always employed through the whole course of the disease; and the use of opium, which, in this case is conjoined with the antisthenic, or stimulant remedies, is admitted only for the purpose of acting as a sedative and duller of pain: From the dread of fever, though a great quantity of blood is often lost by the wound; still large bleeding is practised, the belly is purged, nourishment is withheld, abstinence enjoined: The most frequent consequence of which treatment is death; indeed recovery must be owing to accident.

DCCXXXVII. But all this is a method of cure conducted upon an erroneous theory, as is proved by all the principles of this doctrine, and by the very unfortunate issue of the practice. In a person, who has lost a great deal of blood, an over-proportion of blood can never be the cause of sthenic diathesis: Neither can any tolerable reason be assigned for the profuse evacuation of the
ferous

ferous fluid, or for not rather supplying new fluids by the use of food. It is in vain to appeal to frequency of the pulse, as a sign of an excess in the quantity of blood, and of too much vigour, or of any irritation that requires an antisthenic plan of cure: For, besides its hardness, if the pulse is not, at the same time, strong and full; it has been often above demonstrated, that all its celerity depends upon debility and penury of blood (*r*). Finally, as the sthenic diathesis depends upon the general sthenic noxious powers; and as the pain from local affection, and particularly inflammation, has no tendency to induce that diathesis, but the contrary one of debilitating (*s*); this is another reason for the supposition of the habit, either remaining such as it was before the wound was received (*t*), or, which is more probable, of degenerating into the asthenic diathesis. The true explanation of the distinction be-

(*r*) See par. CLXXIX. to CLXXXI.

(*s*) DCCX.

(*t*) Which can hardly happen if blood has been lost, which must diminish the excitement, and in proportion to its degree.

twixt irritation and sthenic diathesis is a confirmation of the same conclusion; the sthenic diathesis being that state of the system, which is produced by all the powers, the common operation of which is stimulant, over the whole system, and by fulness in the vessels among the rest, and which is to be removed by powers that weaken the whole system, and by evacuant remedies which act by the same general operation; whereas, on the contrary, irritation is that state, in which the whole body is often, without any stimulus, debilitated (*u*); or often where a local stimulus, such

(*u*) When the body is debilitated, the ordinary stimuli, that in its healthy state invigorate it, and even a much less degree of stimulus, will produce the irregular motions, which are supposed owing to irritation; not that any thing irritating is applied, but that the excessive abundance, or defect of excitability, admits not, without such effects, the degree of stimulus, which, applied to it in its healthy half-wasted state, would produce healthy and vigorous motions. (See XXV. and XXVI. and the addition.) The tremours that are occasioned by the turning of a door upon its hinge, the sweat occasioned by slight exertions in walking, are so many instances of that, and the irregularities of the pulse are owing to the same cause. As the weakness upon which fevers depends in-

such as distention exciting spasm, or a concentrated acid inducing convulsion, or the pain of a wound, produces general commotion (x), and effects enormous motions in the weakened system. But, whether the debility be independent of stimulus, or excited by it, there is never occasion for debilitating evacuant remedies, but always for moderately stimulant ones: And we have only to take care, that the sthenic diathesis be not produced by the method employed for the cure, and thereby a general disease—at least, a predisposition to general disease—be superadded to the local, which could not fail to aggravate the latter.

creases, so also do the supposed symptoms of irritation, such as colliquative sweats, colliquative diarrhoea, subfultus tendinum, &c. But they are all the effect of the general weakened state being fluttered by very slight stimuli. At other times irritating powers, in the same weakened state, do occur; such as those mentioned in the text.

(x) But even in that case, the real state is debility, and the indication of cure is to remove it, as well as the irritating powers: Which, while they increase it, are at the same time its offspring, and require stimulants to enable the system to resist the effect. (DCXCIII.)

DCCXXXVIII.

DCCXXXVIII. As, therefore, the antisthenic plan of cure is not to be practised, from an apprehension of a fever being about to come on, and with a view to allay the disturbance arising from it; for it has the contrary tendency, that of inducing fever, and of exciting the disturbance apprehended; so, neither is the stimulant plan to be attempted, till the wound is healed, or the disease has arrived at an advanced stage, and a great deal of debility is induced by the continuance of the pain, lest, if that method should be sooner employed, the blood should be carried with more rapidity than the case would admit of, and with an increased momentum, into the still open terminations of the vessels: For it is understood, that neither diathesis takes place in this case, and that the only affection present is a commotion over the system, depending upon local affection; and that, consequently, there is no occasion for the remedies of either; excepting upon this single consideration, that, as the loss of blood, in proportion to its degree, has a tendency to produce more or less of asthenic diathesis; there will, therefore, in that proportion,

A a 2

portion,

portion, be occasion for some sthenic remedies.

DCCXXXIX. During the first days of the disease, because the patient, all at once, ceases from gestation, exercise, and the other functions both of body and mind, and of passion or emotion, to which he has been accustomed, and, of course, less nourishment and recruit is now required; there should be such an abatement in his allowance of the usual stimuli, as to accommodate what is used to the present condition of the system and the state of the wound just described (y). Therefore, to prevent too great an impetus in the vessels, silence should be kept around the patient, he should not speak himself, he should lie quiet, and his posture should not be changed but to avoid the disagreeable feeling of too long continuance in it, and even then it should be done as warily as possible. He should make his water lying, in an urinal; he should rather use soups, than solid meat; his wound should be examined every day, for the sake of keeping it clean;

(y) See last paragraph.

its

its progress should be observed; it should be dressed with fresh, soft, and bland matter; and if, even at this early period, any faintness appears, a glass of wine should not be withheld.

DCCXL. After some days, which may be more, or fewer, according to the strength of the patient, when the habit is falling into debility, from the severity or long continuance of the pain; besides the soups formerly allowed, meat as rich and delicate as possible should be given; wine should be administered a little at a time, but often, and upon the whole in large quantity; and then, at last, recourse should be had to opium, which, in the common practice, is usually given from the beginning of the disease, and to the other diffusible stimuli; and the disease should be treated precisely in the same way as a typhus.

DCCXLI. When very tender external parts are violated by any rude matter, as where a thorn is pushed under any of the nails, and an inflammation spreads from the affected part to a considerable extent, and then, upon account of the great sensibility

of the part, the whole body is drawn into consent; the injured part should be fomented with warm water, and dressed with lint, and soft and bland ointment: And as long as the disturbance of the system remains, the patient should be kept quiet, and free from motion, and nothing more attempted.

C H A P. IV.

*Of a Part of a general Disease degenerating into
a Local.*

DCCXLII. TO set about the treatment of that division of local, organic diseases; in which a part, or symptom, of general disease degenerates into a local one; we next proceed to

Suppuration.

DCCXLIII. Suppuration, with which we begin, is for the most part a consequence of general inflammation, whether sthenic, or asthenic, or of that inflammation, which is a symptom of general diseases, or it is a consequence of local inflammation, whether sthenic, or asthenic. During suppuration, the pulse is softer, fuller, and a little slower, than in sthenic disease, when that precedes it; but a great deal slower than in asthenic disease, if this happen to intervene; and it

is accompanied with an undulatory, and, as it were, a pulsatory, motion of the affected part; these symptoms are commonly preceded by a shivering: If the affection is internal, the patient should be kept quiet, and free from motion, and be stimulated; if it be external, the affected part should, over and above, be fomented, dressed, and covered, and the pus, when ripe, let out.

Of Pustule.

DCCXLIV. A pustule is a purulent vesicle, gradually growing turgid, and at last of its own accord opening in consequence of having become soft and full of pus.

DCCXLV. It follows the small-pox, arising from the contagion peculiar to that disease: In the small-pox the number of the pustules is greater or less, as more or less sthenic diathesis, occasioned by improper treatment, or a neglect of the proper, has preceded (a).

DCCXLVI. The indication of cure is,

(a) XXI. LXXVI. XCVI. XCVII. XCVIII.

first

first to remove sthenic diathesis, and then, if that has passed into the asthenic, to remove it, each by its respective remedies; and to besprinkle the pustules with strong spirit, or with laudanum, and in the former case to guard against cold, in the latter against heat, and to open the pustules and foment them.

Of Anthrax.

DCCXLVII. Anthrax is a glandular tumour under the skin, gangrenous at the top, and inflamed at its edges all round.

Of Bubo.

DCCXLVIII. Bubo is a glandular tumour, especially affecting the groin; it has a tendency to suppuration.

DCCXLIX. These two affections, the anthrax and bubo, as well as carbuncle, are almost always combined with a general disease, to wit, sometimes with typhus, much oftener

oftener with the plague. They depend upon a contagious matter, and, in fo far as they do not fufficiently yield to the general remedies, they must be treated with a very strong spirit poured upon them, with laudanum, and the lancet.

Of Gangrene.

DCCL. Gangrene is an imperfect inflammation of a part, not terminating in suppuration, discoloured, scarce painful, consisting of pustules of a bad matter, and at last inducing the death of the part.

DCCLI. The noxious power, that precedes gangrene, is often inflammation, often ultimately violent in a sensible part, oftener languid, and occupying a part less sensible or less supported by the powers of life (*b*); it is sometimes a symptom of the phleg-

(*b*) The inflammation, out of which gangrene arises, is always unsupported, and the gangrene always a state of either direct or indirect debility; the high excitement in the phlegmasiæ, and the low in fevers, causing that.

masiæ,

mafiæ, sometimes of fevers, sometimes of local phlegmone (c).

DCCLII. The method of cure, when the gangrene is seated in the alimentary canal, is to pour in spirit and laudanum; when the viscera secluded from the air are affected, to place some, but much less hope, in these and other stimuli. And, as the same remedies also suit gangrene, when it is external, consequently liquid opium should be rubbed in upon the dying part, spirits should be poured upon it, the parts already dead should be cut out, the edge of the living part all round should be stimulated, and an inflammation excited in it.

Of Sphacelus.

DCCLIII. Sphacelus is a more perfect and more extended gangrene, with an extinction of sense, motion, and heat; in which the part becomes soft, blackish, completely black, and at last thoroughly putrid to the very bone, thoroughly cadaverous, and shifts

(c) CCCXLVII. DCLVII. to DCXCIV.

rapidly

rapidly to the neighbouring parts, and quickly extinguishes life.

DCCLIV. The remedies are in general the same as in gangrene, but they should be stronger, and administered in greater quantity, and with greater nicety, and in less expectation of a cure. When any limb is greatly affected, it should be immediately cut off, to prevent the sound parts from being infected.

Of Scrofulous Tumour and Ulcer.

DCCLV. When a scrofulous tumour and ulcer has been of long standing, has disfigured the parotid gland and neighbouring parts, and all the remedies, that have any effect in removing scrofula, have been employed; no more is to be done, but to keep the ailing part clean, foment it often, and defend it from the injury of the air; unless, as local debility also takes place here, spirit and laudanum, applied to the part, may be of service.

Of

Of Scirrhus Tumour.

DCCLVI. When the tumour, which, while it was moderate, was a part or symptom of the general disease, called scirrhus, has now attained a certain bulk; if it be external, or situated in the exterior or convex part of the liver, it should be cut off, and the system invigorated: If it be internal, nothing can be attempted, but to prevent its increase by stimulant remedies, and in that way keep the patient as long alive as possible, and in as good health as his circumstances will admit.

DCCLVII. The two heads of division that remain(*d*) are of so obscure and abstract a nature, that, if ever they are to be attempted, they must be passed over at present. The third head(*e*) is here only imperfectly sketched and scarce begun: But, because it both admits of a complete execution,

(*d*) DCXCVIII. and DCXCIX.

(*e*) DCXCVII. DCCXLII. to DCCLVII.

and,

and, when so executed, will make an important addition to the work ; it shall be prepared for the public perusal, as soon as I shall be happy enough to find as much leisure and scope for thinking as are requisite to rescue the subject from its present intricacy, disorder, and obscurity.

I N D E X.

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